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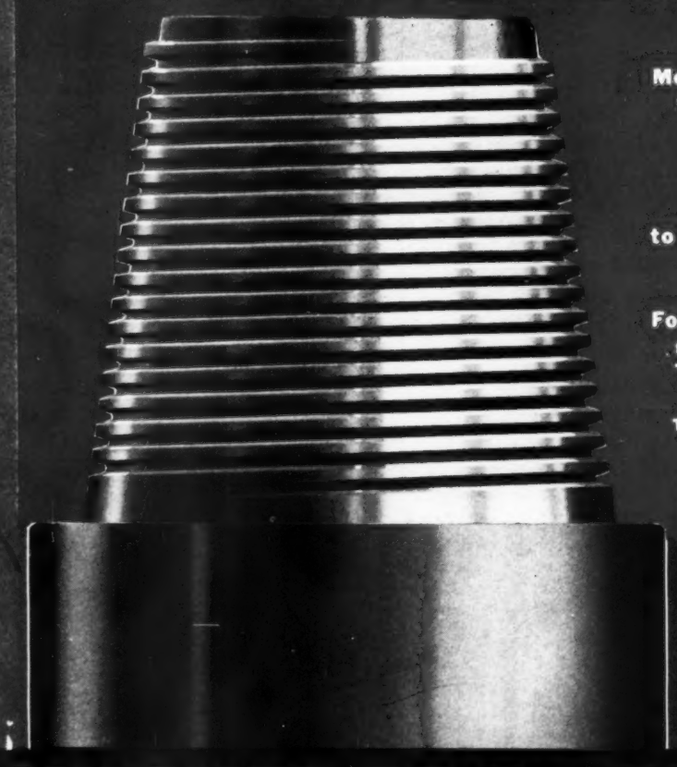

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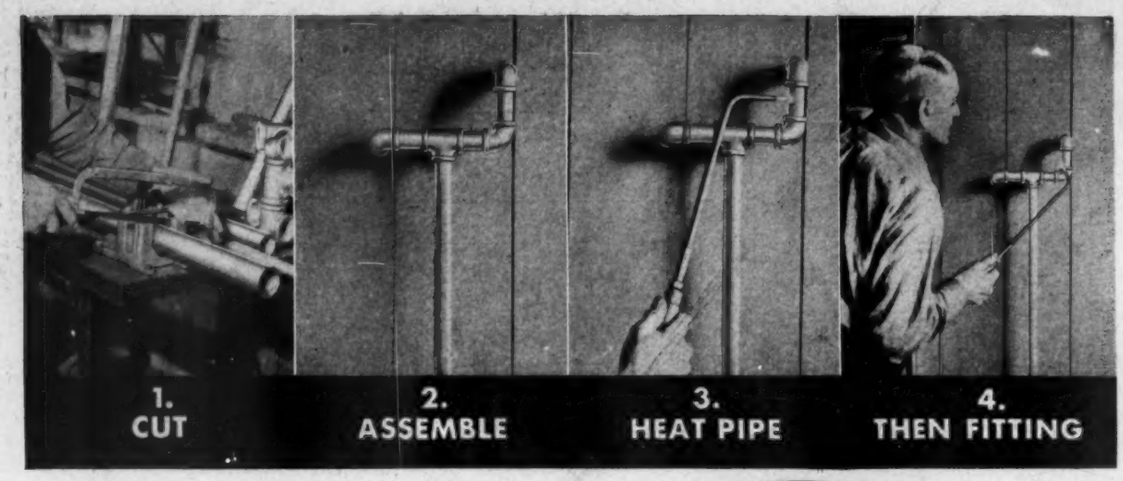

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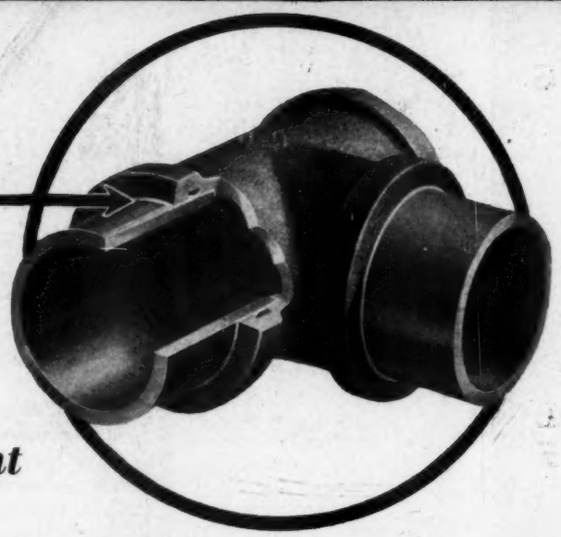

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Big Decrease in Crude Production, but Output Is Yet Above Federal Allowable for August

By JAMES McINTYRE

WHILE daily average crude oil production in the United States declined 118,053 bbls. from the production of the previous week, it was 62,481 bbls. above the August daily allowable set by the Federal Oil Administrator, and coming at a time when oil is running to storage it does not tend to strengthen the market situation. Texas as usual is the great offender.

Oklahoma wildcatters made two widely separated discoveries in the past week, and Oklahoma County is given very substantial promise of a rich but probably small pool by the performance of the latest of the few wells already drilled in the Edmond area. The Fitts Pool in Southern Pontotoc County developed two large Wilcox sand producers, definitely establishing that pool as a prospective major field. A wildcat test in Section 5-10-4, near Shawnee, Pottawatomie County was showing paying production in the Earlsboro sand, and a new well in the Edmond Pool started off at the rate of 6,000 bbls. per day on a four-hour test.

Great interest is being shown in the bottom hole pressure tests to be taken in the East Texas Field. It is believed the average will be lower than the record low pressure taken last mid-year at a time when the field was producing 1,000,000 bbls. per day.

Late developments in the East Central Texas fields have been disappointing to operators who backed their faith in that country with their money. A salt water hole, a location south and two locations west of the New Birmingham discovery well gives that pool a direct north and an easterly chance of further production. In the Cayuga area a dry hole in the past week 3 miles west of the discovery well hedges the field in that direction.

In the Gulf Coastal region a new gas producing spot was opened in Galveston County in a test which, when the pay was hit, proved to have found a high pressure gas sand. The well blew out and caught fire but was soon extinguished when the well sanded up. It is believed oil underlies the gas, which makes the discovery one worth watching.

The Rocky Mountain fields developed little of interest except that in Lea County, New Mexico, drilling operations have increased to the 1930 level. The acidization of wells in that limestone producing area tends to considerably increase the production.

In California, in anticipation of a brisk fuel oil demand, operators in the pools producing low gravity crude are increasing their drilling operations. Mount Poso and Edison fields in Kern County, in particular, have felt the influence of the anticipated demand.

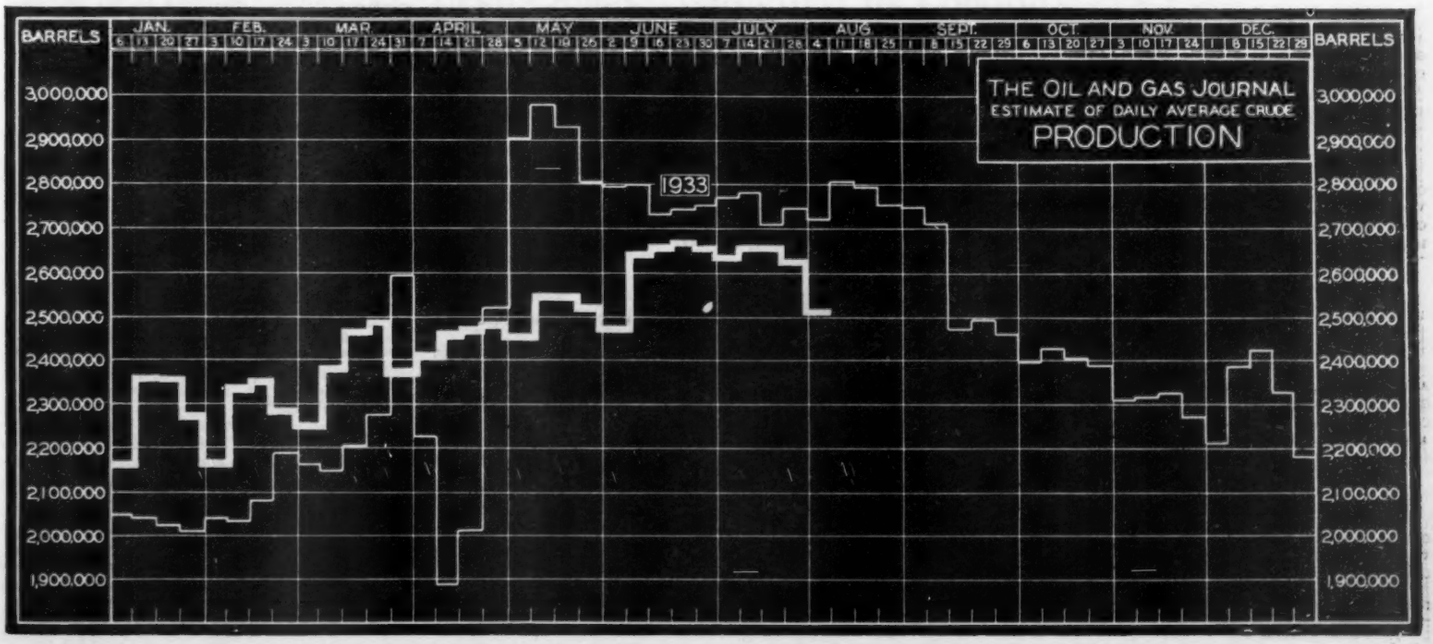
The West Cole Field in Webb County, Southwest Texas, because of the discovery of a deep-lying producing sand, believed to be the Cockfield, is expected to prove a major producing area.

Crude Oil Production in the United States

Estimated daily average production for the week ending August 4, and a comparison with previous week and the Federal allowable follow:

		Federal allowable	
	Aug. 4	August	July 28
Oklahoma—			
Oklahoma City	96,705	.....	154,595
Seminole-St. Louis	81,520	.....	99,050
Remainder of State	236,955	.....	238,085
Total Oklahoma	415,180	480,100	491,730
East Texas—			
Lathrop	224,660	.....	230,340
Kilgore	163,300	.....	167,420
Joiner	145,690	.....	149,390
Total East Texas	533,650	.....	547,150
West Texas	142,508	.....	141,265
North Central Texas	93,165	.....	92,448
Texas Panhandle	61,247	.....	62,754
East Central Texas	50,553	.....	51,550
Gulf Coast—Texas	163,510	.....	170,405
Southwest Texas	57,195	.....	56,246
Total State of Texas	1,107,828	1,001,300	1,121,818
Kansas	132,160	131,200	136,755
North Louisiana	24,405	.....	24,555
Gulf Coast—Louisiana	71,865	.....	73,615
Total Louisiana	96,270	87,200	98,170
Arkansas	31,660	30,400	32,065
Eastern Fields (except Michigan)	102,000	102,200	104,000
Michigan	30,403	33,200	30,616
Rocky Mountain area	96,280	93,500	96,430
California—			
Santa Fe Springs	39,000	.....	40,700
Long Beach	65,000	.....	67,000
Mountain View	5,850	.....	6,150
Elwood	12,500	.....	11,900
Kettleman Hills	62,500	.....	72,650
Remainder of State	315,150	.....	319,850
Total California	500,000	490,200	518,250
Total United States	2,511,781	2,449,300	2,629,834

Decrease 118,053 Bbls. Daily.



Inhibitors Used for Stabilizing Reformed Gasoline Will Preserve Its Nondetonating Properties

By C. D. LOWRY, Jr., C. G. DRYER, J. C. MORRELL and GUSTAV EGLOFF
Universal Oil Products Co.

The employment of inhibitors to give storage stability is highly advantageous in the refining of reformed gasolines produced by straightrun gasolines.

Reformed gasolines as produced are usually of fair color and contain no preformed gum. They are oftentimes low in gum as determined by copper dish, but many such gasolines are unstable in storage and to insure stability must be either treated or inhibited. It is desirable to minimize refining of these products for they are of high antiknock value and the retention of all of their nondetonating quality is important. Their full antiknock rating can be preserved and both the cost of the treating operation and the loss of oil occasioned by treatment can be saved by use of inhibitors. By this means the induction periods may be increased, copper dish gum reduced, and the fuels made sufficiently stable to remain practically unchanged in storage for a year or longer.

Gasolines made by cracking straightrun gasoline which are to be dyed can usually be inhibited and sold without any treatment. Some such products require sweetening before addition of the inhibitor; and where a water-white motor fuel is desired a very light treat, insufficient to produce storage stability, followed by addition of the inhibitor will give a gasoline of good color and stable for long periods of time. This manner of treatment gives less loss both of gasoline and of octane value than would be suffered were the required stability obtained entirely by chemical refining.

Samples Tested

Samples of a commercially produced West Texas reformed gasoline, unrefined, were stored in vented glass bottles at an average temperature of 70° with and without the addition of a wood tar inhibitor (Universal Inhibitor). The results over a period of 15 months are given in Table 1.

TABLE 1—STORAGE OF WEST TEXAS REFORMED GASOLINE

Gravity, deg. A.P.I.	60.8
A.S.T.M. 100 cc. distillation:	° F.
Initial b.p.	86
Distilled over:	
10 per cent	136
50 per cent	247
90 per cent	360
End b.p.	403
Induction period, minutes:	
No inhibitor	40
Plus .025 per cent wood tar inhibitor (Universal Inhibitor)	310

	At start		4 months		7 months		15 months
	Uninhib.	Inhib.	Uninhib.	Inhib.	Uninhib.	Inhib.	Inhibited
Gum, mg./100 cc.:							
Copper dish	68	10	347	17	312	8	10
Air jet	0	0	138	6	286	2	7
Color	15	13	—15	16	Yellow	16	17
Octane number	74	74	68	73	64	71	..

The uninhibited gasoline contained so much air jet gum after two months (52 mg.) that it could not have been used without probable gum trouble. It also darkened in color, and depreciated rapidly in antiknock rating. The inhibited sample, at the end of 15 months, was still a satisfactory motor fuel, low in gum and of good color.

A large number of other reformed gasolines, produced by cracking straightrun gasolines on experimental cracking units, were tested with the wood tar inhibitor. In Table 2 are presented data from experiments in which the inhibitor was added to the unrefined motor fuels. It will be noted that all of these gasolines were initially of low induction periods, and would undoubtedly not have been stable in storage. The induction periods were increased to figures assuring satisfactory storage life by adding from 0.01 to 0.025 per cent of the inhibitor. Some of the gasolines were initially very low in copper dish gum, but in gasolines of low induction period this is believed to be no assurance of stability in storage. Predicting the behavior of a gasoline in storage by copper dish gum alone, in our opinion, is not safe procedure.

Sweetening of a reformed gasoline may slightly reduce the effectiveness of an inhibitor, but as a rule sweetened gasolines are inhibited without difficulty. Below are given data showing that the untreated West Texas gasoline which appears in Table 2 after sweetening is not difficult to stabilize by the wood tar inhibitor.

WEST TEXAS UNTREATED SWEETENED

Wood tar fraction, per cent (Universal Inhibitor)	0	0.025	0.05
Gum, mg./100 cc., copper dish	108	6	4
Induction period, minutes	30	180	345

Water-white color may be obtained in reformed gasolines by light acid treatment, for example, 1 to 2 pounds, 93 per cent sulphuric acid, or other methods. Results of light acid treating are presented in Table 3, which includes gasolines appearing in Table 2 after they have been refined.

It will be seen that while light acid treatment has improved color and reduced copper dish gum, it has not produced satisfactory storage stability. Much more severe refining would be required to obtain satisfactory products by acid alone. This is exemplified by the results on the Kansas sample, which even treatment with 4 pounds of acid did not bring to a satisfactory induction period. The treated gasolines are exceedingly responsive to the inhibitor, and much less than the amounts here used would have produced products which might be stored for long periods.

Summary of Results

Reformed gasoline produced by cracking straightrun gasolines are specially well adapted to treatment by an inhibitor such as those from wood tar (Universal Inhibitor). If gasolines of this type are to be dyed they can usually be marketed without chemical treatment beyond sweetening, if necessary, and stabilization by a small proportion of inhibitor. When a water-white product is desired this can be obtained by a very light chemical treatment, much less severe than would be needed to produce storage stability. These lightly treated gasolines are particularly responsive to the wood tar inhibitor, and by inhibition can be rendered stable more economically than they can be stabilized by chemical treatment alone. The saving through the use of an inhibitor in place of refining agents is approximately 15 cents per barrel of gasoline.

ALCOHOL FROM CORN

Despite widely circulated reports of the possible establishment in South Africa of an industry producing alcohol from surplus corn supplies, local government authorities see little hope.

It is understood, the report states, that of all plans proposed so far, the smallest calls for 2,560,000 bags (200 pounds) of corn, estimated to cost 7 shillings per bag. Production was estimated at 28,000,000 gallons of power alcohol, 3,500,000 gallons of tractor fuel, 150,000 gallons of fuel oil, 745,000 gallons of corn oil, 1,500,000 bags of dry distiller's grain and 150,000,000 pounds of dry ice. Corn at 7 shillings per bag would place the estimated cost of producing a gallon of power alcohol at about 11½ pence per Imperial gallon, whereas gasoline can be landed in South Africa at 4 pence per gallon, the report states.

TABLE 2—INHIBITION OF UNTREATED REFORMED GASOLINES

Source:	Pennsylvania	West Texas	Kansas	Kevin, Montana	Michigan	California, Kettleman Hills	Venezuela	Poza Rica Mexico	Naranjos, Mexico
Gravity, deg. A.P.I.	65.6	59.4	62.0	60.7	62.2	56.1	60.2	59.6	60.3
Color, Saybolt	18	15	...	19	13	15	Yellow	17	6
A.S.T.M. 100 cc. distillation:	° F.	° F.	° F.	° F.	° F.	° F.	° F.	° F.	° F.
Initial b.p.	105	100	104	96	101	100	102	90	91
Per cent distilled over:									
10	152	157	152	146	143	150	144	133	137
50	236	262	246	243	239	275	228	213	215
90	322	366	348	330	315	374	353	347	337
End b.p.	365	396	387	386	384	397	401	414	413
Octane number	61	*74	*63	72	61	68	70	76	75
Wood tar fraction, per cent (Universal Inhibitor)	None 0.01	None 0.025	None 0.025	None 0.01	None 0.01	None 0.025	None 0.025	None 0.025	None 0.01
Gum, mg./100 cc., copper dish	16 13	5 5	147 7	20 10	18 16	146 30	54 9	42 22	26 9
Induction period, minutes	75 250	45 345	15 270	35 280	155 280	280 375	100 375	145 310	50 270

*Research method.

TABLE 3—INHIBITION OF LIGHTLY TREATED GASOLINES

Source:	Pennsylvania	Kansas		Kevin, Montana	Michigan	California, Midway	California, Kettleman Hills	Venezuela	Poza Rica, Mexico	Naranjos, Mexico
Acid, lb./bbl.	1	1	4	1	1	2	2	1	1	2
Gravity, deg. A.P.I.	64.4	61.5	61.3	59.1	60.9	48.0	53.5	59.3	59.3	60.1
Color	30+	30+	30+	26	30+	30+	27	30	30	30
A.S.T.M. 100 cc. distillation:	° F.	° F.	° F.	° F.	° F.	° F.	° F.	° F.	° F.	° F.
Initial b.p.	124	110	108	110	104	116	116	110	108	108
Per cent distilled over:										
10	154	153	153	152	148	168	166	150	142	144
50	226	235	237	245	232	286	283	224	210	212
90	290	326	329	342	330	350	362	328	289	290
End b.p.	342	375	395	370	378	390	392	374	341	356
Octane number	60	*62	...	70	57	75	66	69	74	71
Wood tar fraction (Universal Inhibitor)	None 0.10	None 0.05	None 0.025	None 0.025	None 0.01	None 0.025	None 0.025	None 0.025	None 0.025	None 0.025
Gum, mg./100 cc., copper dish	4 4	16 ...	2 ...	28 11	4 4	3.5 30	34 14	13 3	3 3	3 ..
Induction period, minutes	Over 285 500	Over 45 1,200	Over 210 1,200	30 900	Over 315 500	120 455	265 705	160 1,230	Over 30 900	Over 95 960

*Research method.

Congressional Hearings to Begin in September; Subcommittee Preparing Pipe Line Report

By HUGH D. MALLON
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Aug. 6.—Hearings by the House Committee investigating the oil industry are expected to begin during the first part of September in Washington. To assist in the preparation of data for the committee a staff of experts have been named by Representative Cole (D., Md.), chairman of the committee. The list of assistants is: M. S. Breckenridge, special counsel for the House Interstate and Foreign Commerce Committee, who will concentrate on the subject of pipe lines; Ben Lindsly and Harold C. Miller, of the U. S. Bureau of Mines, production methods and technology; Hale S. Soyster, of the U. S. Geological Survey, geological and petroleum reserves; H. J. Struth, of the Petroleum Administrative Board, inter-regional movements and statistics; F. L. Carmichael, Petroleum Administrative Board, an analysis of consumer demand; A. H. Redfield and H. A. Breakey, of the Bureau of Mines, exports and imports; Dr. Katherine Carman, Petroleum Administrative Board, an analysis of production costs; Douglas Arant, Petroleum Administrative Board, legal work, and A. J. Kraemer, Bureau of Mines, refineries.

Three members of the investigating committee are expected to visit the oil fields of Kansas the week of August 13, starting at Wichita. The members who will probably make the trip are Representative Cole, chairman, Representative Pettengill of Indiana and Representative Mapes of Michigan. They will be in Wichita on August 13, according to present plans and will proceed from there on a tour of the oil fields, which it is expected to take a week to cover.

From Kansas the committee members will go to the Rocky Mountain fields and spend the week of August 20 in that area inspecting the oil properties. They are then expected to return to Washington or to their homes.

Report on Pipe Lines

A report on pipe lines will be made by the transportation subcommittee of the Planning and Coordination Committee and submitted to Administrator Ickes during the first part of September it is expected. This report was called for under the provisions of Article 6 of the oil code which says: "The transportation subcommittee of the Planning and Coordination Committee shall investigate transportation practices and rates, and shall from time to time recommend to the President such action as may be appropriate to be taken under the National Industrial Recovery Act or otherwise." This tentative report by the subcommittee is the first report which the committee has considered making, but it is a very comprehensive report and will adequately answer most questions.

This report covers pipe line practices, rates and related subjects. The place of the pipe line in the petroleum industry is explained, and the necessity for the continuance of this transportation facility is covered. A review of previous investigations is gone into, with the explanation that the majority of these were made so long ago that they are of no practical use and can form no groundwork for an up-to-date report. To emphasize this a short resume of the development of the industry during the past few years is brought in which shows the rapid growth and development, as well as the quick change of the producing areas in the oil industry.

Early developments of pipe lines are covered starting with the first line in Pennsylvania and the growth of this method of transporting oil as the source of production changed from Pennsylvania to the Mid-Continent, and to the Gulf Coast and East Texas. The report stresses that during all this time pipe lines have always been treated as plant facilities, in that, practically every pipe line has transported oil almost exclusively to the refinery which owns the line. The primary purpose of building the pipe line in the first place was to assure to the refiner who built the line an adequate supply of crude at his refinery.

Points Against Divorcing

A comparison between pipe line and railroad interests is made in the report and it is pointed out that while the railroads have a great diversity of commodities which are transported by rail the pipe lines cannot transport any product except petroleum. It is also pointed out that transportation of petroleum by rail would be much less efficient, much more expensive and a great deal slower than by pipe line. The report says it would be almost physically impossible for the railroads to transport the amount of petroleum which is needed at the various refineries throughout the country. Several technical reasons as to why it is not feasible to ship by rail are also brought out.

Pipe line rates and earnings are gone into very thoroughly. The rate and earnings carried in this report are taken from the statements which are filed with the Interstate Commerce Commission by those companies reporting to the commission. These figures show that in 1932, a year which it is claimed was one of the best for the pipe line industry, the average earnings of these companies was only 14.4 per cent. This statement was made to refute a statement carried in the so-called Splawn report on pipe lines which was made to the House Interstate and Foreign Commerce Committee in 1933 which said that pipe lines paid for themselves in from one to five years.

The inadvisability of divorcing pipe lines is covered also. It is pointed out that if pipe lines were divorced there would be no one to take over the properties, and further, there would be no one interested enough to extend the lines to new fields except interests allied with refineries. With these interests forced to invest in pipe line extension it would be just as feasible to leave the ownership in their hands.

Another point brought out is that if the pipe lines are divorced from integrated companies the present posted price system would be abandoned. Such a withdrawal, it is claimed, would result in a cut-throat competition which would almost overnight wreck the crude oil market, and at the least make that market very uneconomic.

East Texas Residuum

A meeting of the refinery subcommittee of the Planning and Coordination Committee has been called for August 8 at which time several pressing problems will be taken up. One of the major problems confronting the committee at this time will be to seek a solution for the residuum from the East Texas "hot oil." The gasoline buying program did not contemplate the problem of taking care of this residuum, and consequently, the market in East Texas is filled with illegally produced petroleum products which cannot be legally sold.

Another point to be considered by the members is where does the authority of the refinery committee begin and end under the revised sections of the refinery code. The recent revision, which established the national co-ordinator and the board of review and set up the method of setting gasoline allocations took a great amount of authority from the committee, and what the committee must now do is to determine what is left.

Blue Eagle Withdrawals

Louis R. Glavis, director of the Division of Investigations of the Department of the Interior, has issued a circular letter, No. 60, covering the distribution of the blue eagles for the petroleum industry. This letter deals with the question of withholding the eagle from all the units of an operator if one of the units has violated, or is violating the code. The text of the letter follows:

"Where application is made for delivery of the blue eagle poster to a unit or location owned or controlled by a person, firm or corporation owning or controlling other units or locations in the petroleum industry the delivery of such posters will not be withheld from all units or locations owned by such person, firm or corporation because of violation of the petroleum code at one of such units or locations, unless the Division of Investigations finds that such violation was made with the knowledge or approval of the controlling person, firm or corporation or the person having general supervision over the unit or location where the violation occurred. In case a major company or an independent operator distributing petroleum products in several states has adopted as a general policy, a practice in violation of the petroleum code, and you have secured evidence of such violation you should immediately advise this office that you are recommending the withholding of the blue eagle to that company for such violation involving a general policy so that special agents in charge in other districts may likewise recommend the poster be not issued to such company in the states covered by thir districts.

"In the event there is pending a complaint against a person, firm or corporation for selling below cost in violation of Rule 4, Article 5 of the code or an adverse report has been filed after investigation of such complaint, the blue eagle should not be issued unless assurance has been obtained in affidavit form as to future compliance, particularly in regard to observance of Rule 4, Article 5. On account of the provisions of Paragraph 2 of that rule, it is necessary to consider a complaint of selling below cost as an uninvestigated complaint even though the facts obtained by this division may justify the filing of an adverse report, and the poster should be issued accordingly."

Report on Natural Gas

A report on the growth and development of the natural gas and gas pipe line industries in the last few years will be submitted to the Federal Trade Commission in a public hearing to be held as part of its investigation of power and gas utilities. The report will be entitled "Growth of Natural Gas Production, Distribution and Interstate Movement" and will cover the advancement and expansion made in this field since 1926.

Material for this report has been obtained in answers to questionnaires submitted to operating companies and holding companies, from annual reports of these companies, and from other sources. Several charts showing the developments will also be introduced with this report.

(Continued on Page 45)

G. Legh-Jones Transferred to London; Sidney Belither Named as Successor

NEW YORK, Aug. 7.—George Legh-Jones has been relieved of his duties as president of the Shell Oil Co. of California and will leave shortly for London where he will become one of the chief executive officers of the Royal Dutch-Shell interests. It is understood that in his new position Mr. Legh-Jones will be assistant to Sir Henry Deterding in general charge of all operations in North and South America.

He will be succeeded as president of the California Shell company by Sidney Belither, vice president of the company. He has been connected with that company and the Shell Union Oil Corp. in an executive capacity for several years. Both Mr. Legh-Jones and Mr. Belither are in New York at this time.

Mr. Legh-Jones was transferred from the London office of the parent company some 8 or 10 years ago to Los Angeles, to assume the duties of president of the Shell Oil Co. which was incorporated July 30, 1915, as the Shell Co. of California and the name changed to the present form in January 1, 1929.

The California company was formed to consolidate the holdings of the Royal Dutch-Shell companies.

G. LEGH-JONES

Valvoline Oil Company Completes Its Major Construction Program at the Butler Refinery

By H. J. DUNMIRE
Valvoline Oil Co.

The Valvoline Oil Co. recently started operation of the new distillation equipment at its Butler, Pa., plant. Prior to the erection of these stills, Valvoline started a construction program which included the erection of new filter capacity, earth burning equipment, large additions to storage, and the modernization of the shipping department. With the completion of the distillation units, this refinery is now one of the most modern in the Pennsylvania Field.

Foster Wheeler Corp. designed and erected the pipe stills which include a primary crude distillation unit of 2,500 bbls. per day, a lub rerun unit of 2,000 bbls. per day, and a naphtha rerun unit capable of running 750 bbls. per day. Crude oil run to these stills is strictly Pennsylvania grade, selected and pumped to the refinery by Valvoline Pipe Lines.

The furnace or tube still of the crude unit is of the self-supporting type. The heater walls are constructed of 18" of fire brick lining and 3" of insulating brick lining with transite type covering. The steel work and heating surface are supported on foundations independent of the brick work of the setting. The bridge wall is constructed entirely of fire brick and is air cooled. Two important features are incorporated in the design to prevent decomposition of the crude oil. First, the inside diameter of the tubes is selected to permit of evaporation in the tubes of the heater, thus supplying the latent heat as the boiling point is reached and thereby reducing the differential between the temperature of the heater outlet and that at the bottom of the tower to 10– or 15° F. In this way the mixture of liquid and vapor attains a very high velocity in the heater tubes and the latent heat required to complete the evaporation in the bottom of the tower is reduced to a minimum. This feature is very important when handling high grade Pennsylvania crudes which are particularly sensitive to temperature. The second feature incorporated allows the length of travel through the tubes of the heater to be materially reduced by extending the heating surface on the outside of the tubes in the convection bank. Gill rings are used; the rings being larger toward the bottom of the convection bank. The radiant section tubes are located under the roof of the heater and are arranged in two rows of staggered tubes, one row above the other; the final passage of the oil being through the upper row.

The fractioning tower is 133 feet high by 6 feet 6 inches diameter and contains 64 trays. Each side stream from the tower is controlled by a Wier type of proportioning valve which, once set, will withdraw side streams to specifications irrespective of the quantity charged to the still. Internal stripping sections are used in the tower. The use of this type stripper permits removal of the light ends without loss of heat by radiation from outside vessels and pipe connections. The exhaust steam from the pumps is superheated in a superheater section located in the convection bank of the furnace. This superheated steam is available for stripping in all sections of the tower.

Flow of Crude

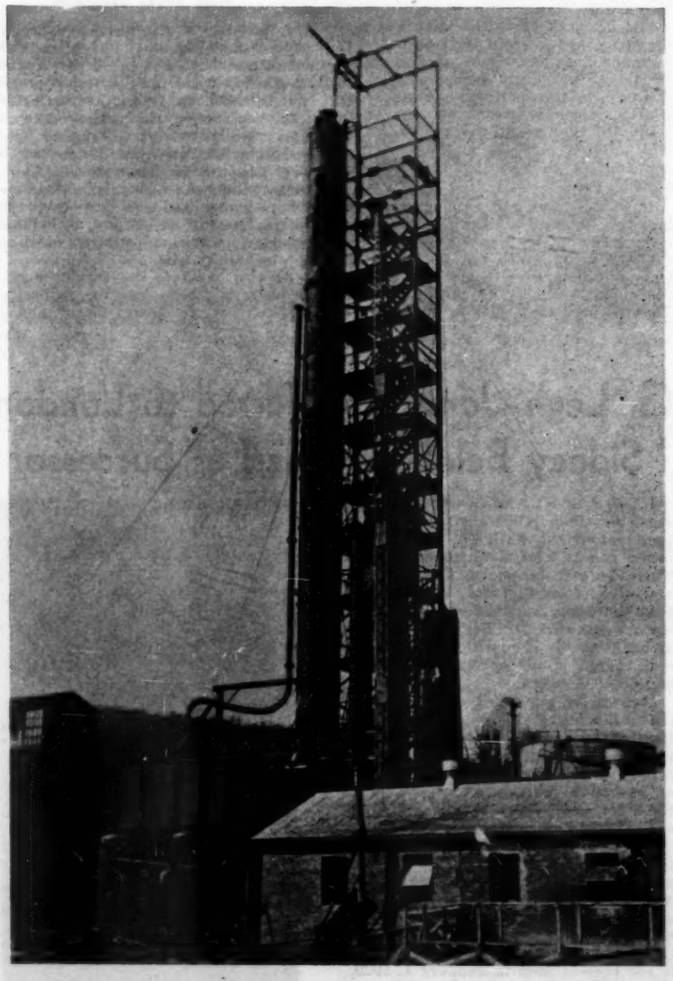
Crude oil from storage is pumped through the liquid reflux and wax distillate exchangers. It then passes through a 5 by 25 feet settling drum where water, sand, or other impurities carried by the crude are settled out under pressure and at about 250° F. temperature. The charge then goes through the bottom exchanger and enters the furnace at about 350° F. When running for 150 viscosity steam refined stock, a transfer temperature of 650°-660° F. is used.

The crude unit was designed to manufacture steam refined stocks ranging in viscosity from 80° at 210° F. to 280° at 210° F. The specially designed steam stripping section in the bottom of the tower permits of exceptionally high flash tests on the steam refined stock when running to a given viscosity. Chart 1 shows a plot of flash versus viscosity.

AVERAGE LABORATORY TESTS OF OILS MANUFACTURED ON NEW DISTILLATION EQUIPMENT

Crude unit—	Grav.	Flash	Fire	Vis. 100	Vis. 210	Cold test	Con. carb.	Pensky Martin	I.B.P.	E.P.	Color
Gasoline	61.5	...	...	..	...	..	...	.	125	375	25+
Naphtha	51.5		...	..		..	...	...	250	395	25+
45 Kerosene	45.0	175	200	..	...	—20	..		365	585	25+
47 Kerosene	47.0	166	190		..	—20	...	....	360	530	25+
Furnace oil	40.0	230	300	44½	...	35	...	...	380	645	..
Fuel oil	38.1	280	330	53	..	50	...	...	384	725	..
Wax distillate	35.5	325	405	71	44½	70	...	...	...	...	1½
125 vis. SRC.	27.5	545	616	..	125	55	1.46%	515	...	...	..
150 vis. SRC.	26.8	570	640	..	150	35	2.0	550	...	...	..
180 vis. SRC.	26.5	600	670	..	181	35	2.32	575	...	...	..
195 vis. SRC.	26.4	610	680	..	195	35	2.6	580	...	...	..
210 vis. SRC.	26.2	615	685	..	212	35	2.8	585	...	...	..
225 vis. SRC.	26.0	620	695	..	225	35	3.0	595	...	...	..
250 vis. SRC	25.8	640	705	..	245	35	3.0	615	...	...	..
Rerun unit—											
Fuel oil	37.4	..	...	..	...	..	...	...	326	706	(*)
1st side 60 vis.	35.5	335	380	60	...	25	...	..	...	...	2
2nd side 100 vis.	32.8	395	450	100	.	25	...	...	...	...	..
Bo.. 150 neut.	31.7	425	490	150	...	20	0.5%	400	...	...	4
Bot. 180 neut.	...	435	500	180	...	20	0.60	410	...	...	4
85 vis. b.s. wash.	.	480	545	..	85	20	.80	460	.	...	8
125 vis. br. stock	...	545	615	..	125	20	1.0	520	.	...	8
145 vis. lr. stock	...	570	640	..	145	20	1.2	545	...	...	8+

*Lt. straw.



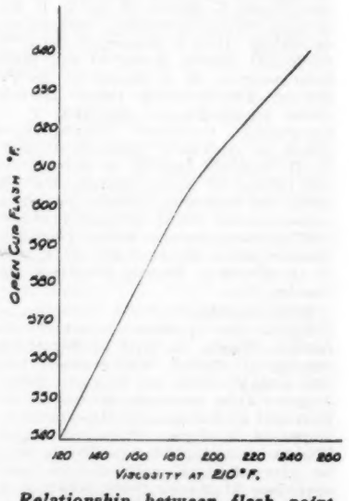
General view of Foster Wheeler crude distillation unit at the Butler, Pa. refinery of the Valvoline Oil Corp. The tower extends 133 feet above its foundation

These figures are average obtained over several months operation. It will be of interest to note that stream samples of 250° viscosity at 210° F. steam refined stock showed flash tests of 645° F.

Besides the steam refined stock six side streams and an overhead cut may be drawn simultaneously from the tower. These streams from top to bottom are light gasoline overhead, solvent, kerosene, 300 oil distillate, gas oil, pressable wax distillate and heavy wax distillate. The heavy wax distillate cut is taken off only when the viscosity of the bottoms runs higher than 170° at 210° F.

Rerun Unit

The lub rerun unit contains many of the features found on the crude unit. The furnace is of similar construction

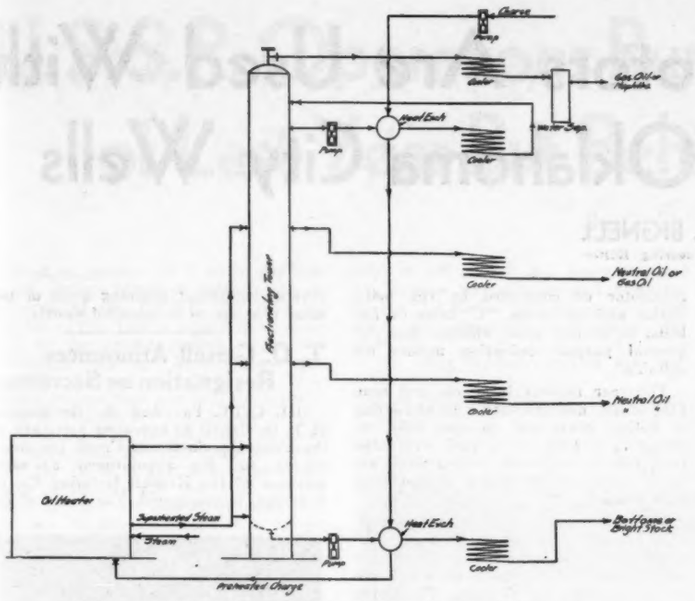


Relationship between flash point and viscosity of cylinder stocks made on new reducing still

with the steam superheater section located in the convection bank. Streams withdrawn include an overhead cut, two side streams, and a lub bottoms stream. Superheated steam is used in the various stripping sections and Wier type valves control the two side stream withdrawals. The tower is 5 feet diameter by 57 feet high. Liquid reflux is withdrawn from the tower and used to preheat the charge before being pumped back to the top of the tower.

The charge to this unit is preheated by pumping through the reflux and bottoms exchangers. When charging pressed wax distillate, the charge enters the furnace at about 300° F. When running to 150 viscosity neutral bottoms, a transfer temperature of 665° F. is used. The transfer temperature used when running to 200 neutral bottoms is about 680° F. When charging bright solution, the preheated charge is about 290° F. and the furnace outlet is held at 600° F.

On both the crude unit and the lub rerun unit, the endpoint of the overhead product is controlled by maintaining the top tower temperature constant with the use of liquid reflux pumped from the upper trays and cooled before being returned to the tower. By using this method of reflux a vapor exchanger is not necessary and all exchangers are placed near the ground level where they are easily accessible. It is also possible



Flow chart of lub distillate rerun unit

to use a fraction from the overhead condensate for reflux if desired.

The naphtha rerun unit was erected to operate in conjunction with the crude unit. This equipment consists of a main tower 57 feet high by three feet 7 inches diameter, a side stripping section, and a reboiler. Three cuts are made simultaneously. The naphtha charge can be pumped from storage tanks or taken direct from the crude unit water separator tank, or by means of a bypass, the overhead vapors from the crude unit tower may be passed direct to the naptha unit. When charging by the first two methods, the charging stock is preheated by exchanging with naphtha bottoms from the reboiler and with steam refined stock from the crude unit.

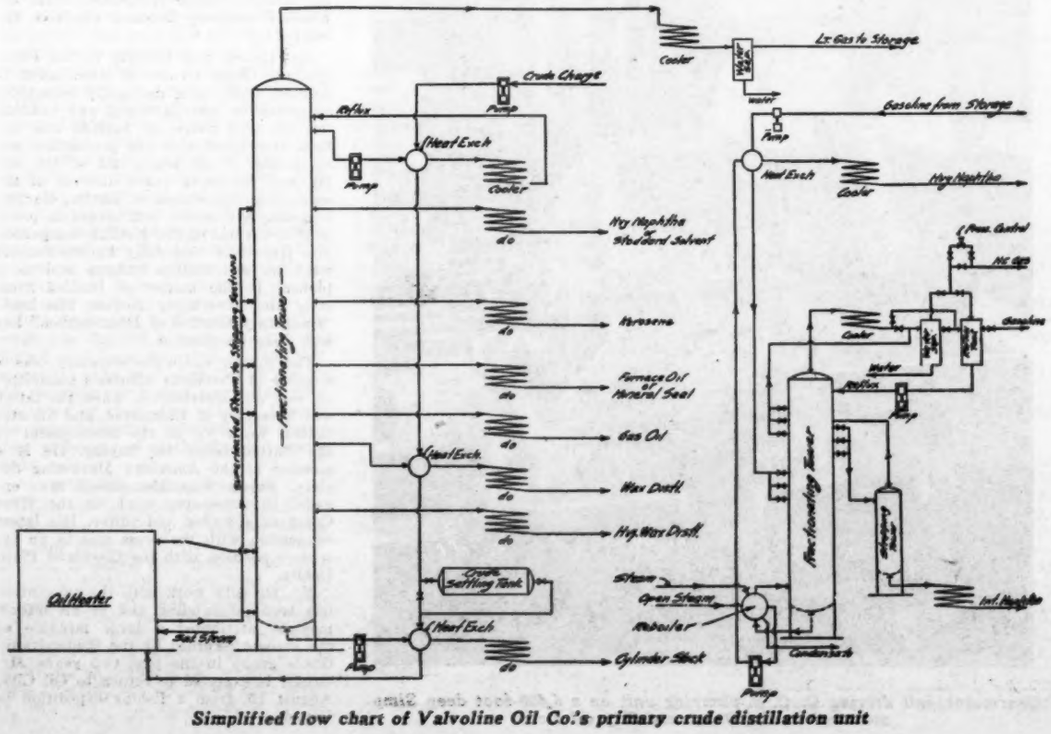
By varying the specifications of the naphtha charging stock, by changing the top tower temperature, the quantity of steam used in the side stripper, or the temperature of the reboiler, a wide variety of naphthas may be manufactured. Included in this group are such commercial grades as Stoddard Solvent, Rubber Solvent, V. M. & P. Naphtha, Turpentine Substitute, and many others.

All three units are equipped very completely with automatic control instruments. Tagliabue air-actuated rate-of-flow meters control the rate of oil charged to each unit. Tagliabue temperature control instruments control the amount of reflux necessary to hold the top tower temperature constant on each unit. A Brown 4-point recording pyrometer records top of tower and flash zone temperatures of both the crude and lub rerun units. A Brown 2-point recording pyrometer gives a record of the top tower and reboiler temperatures on the naphtha rerun unit. The tube still inlet and outlet temperatures of both furnaces are recorded on two Brown 2-point pyrometers. Fisher air-actuated liquid level controllers assure a constant level in the bottom of each tower. The furnace temperatures of both crude and lub rerun units are controlled by Tagliabue instruments. Brown steam flow meters measure the superheated steam delivered to the bottoms stripper in both the crude and lub rerun towers. Each steam line to all other stripping sections is equipped with Foxboro steam flow meters to record the steam flow. Temperatures throughout the furnaces and towers of the three units may be obtained instantly by the use of a Brown 24-point indicating pyrometer with rotary switches. Make-up steam is supplied to the exhaust line through a Tagliabue air-actuated exhaust steam pressure controller.

All pumping equipment is steam driven. The charging pumps, reflux pumps and the bottoms hot oil pumps were manufactured by Dean Bros. Pump & Manufacturing Co.

Fuel oil is supplied to the burners by pumps manufactured by National Transit Pump & Machinery Co.

The accompanying table shows specifications of some of the products which have been manufactured on the crude oil and lub rerun units. These tests, while showing somewhat the flexibility of the steam refined stocks, do not, however, give a true picture of the variety of oils which may be obtained from the other streams. By changing the reflux ratio, the temperatures and/or the steam input into the various sections of the towers, the specifications of the side and overhead streams may be materially changed.



Simplified flow chart of Valvoline Oil Co.'s primary crude distillation unit

Oil Made Crown Property by New Law Passed by the British Parliament

Oil in Great Britain is now the property of the Crown, the Government's Petroleum (Production) Act of 1934 having passed its final stages and been enacted into law.

In the words of the bill, which was first introduced in the House of Lords, the legislation was "to vest in the Crown the property (rights) in the petroleum and natural gas within Great Britain and to make provision with respect to the searching and boring for, and the getting of, petroleum and natural gas, and for purposes connected with the matters aforesaid."

The bill was denounced by certain Conservative supporters of the government as a "gift to socialism" and a "stepping-stone to the nationalization of all unworked minerals."

The bill had a stormy career in the House of Lords and in the Commons, but it was finally enacted in substantially the form requested by the government.

During the parliamentary debates it was learned from the government spokesman that the true purpose of the bill was to pave the way for persons ready to spend money upon the highly speculative business of testing for oil deposits. The spokesman said the object was to remove existing obstacles to such ventures, since the government felt unjustified in embarking on them with taxpayers' money.

Effect of the Bill

The effect of the bill, therefore, was to clear up the uncertainty about the ownership of petroleum if and when it should be found, and in general the bill offered encouragement to large concerns connected with the industry to start searching for oil.

Walter Runciman, president of the board of trade, denied that large companies would receive an improper monopoly or that applications from small drilling concerns had been held up until the act could give a monopoly to the powerful interests.

The government held that the best way to obtain the orderly development of any oil field that might be discovered was to vest the ownership of the oil in the Crown. It was maintained that a landowner could suffer no loss by the state's ownership of what exists only conjecturally, and it was pointed out that the landowner would be fully compensated for any surrender of surface rights.

As a result of operations started as long ago as 1918, oil has been found in commercial quantities only at Hardstoft, Derbyshire. The government itself has lost £500,000 in an oil boring venture.

Oil Editor's View

Approving the new law the Petroleum Times of London says:

"To all the opposition common sense replies that nobody is harmed thereby in a country where few have sought for oil rights, and the few that might have drilled found the law so indecisive that positive action in oil exploitation has been fraught with danger outweighing any ultimate advantage. At least, the way is now clarified. That so much has been made of the so-called 'mystery'—giving it a sinister aspect—can be regarded as a sign of the paucity of tangible opposition. It is certain that the British Government, in a most crowded session, would never have forced this act through but for what it believed weighty reasons.

"The geology of a country does not always coincide with the official maps, and others have found this out in England. More we cannot say at the moment; there are theoretical prospects of oil in England at depths which few have suspected so far. As to one of the chief reasons for opposition to the government's action by a section of Unionists, that of the danger to amenities, we would as soon see oil derricks, seeking industrial wealth for the country, as electricity pylons. Our state may be queer, but even a refinery is as much a thing of beauty as those coal and slag heaps which most have regarded in the past as signs of industrial prosperity. At least an orgy of deep drilling in Great Britain would do as much good for the coal trade as some of the speculative oil-from-coal schemes now brewing. There was reason for the government's secrecy in the past, and it must have expected the opposition caused thereby. But now the requisite powers are granted, the way is clear for the first real test of Great Britain's petroleum potentialities."

REDCLIFF GAS WELLS

REDCLIFF, Alberta, Aug. 4.—Plans for reconditioning natural gas wells in the Redcliff area of the Medicine Hat Field have been recommended by the government inspector for Alberta.

Electric Driven Gearmotors Are Used With Pump Units on Deep Oklahoma City Wells

By L. G. E. BIGNELL
Petroleum Engineering Editor

Beam pumping using electricity as the source of power has been adopted by the Coline Oil Co. for about 25 wells on its Olds and Clauer leases in Sections 24 and 25-11-3 in the southern portion of the Oklahoma City Field. This company has 16 wells on the Clauer lease which are reported to have produced from the Simpson formation a total of 1,470,196 bbls. The 10 wells on the Olds lease in Section 24-11-3 have produced 2,197,397 bbls. up to May 1 from the Simpson formation. Several of the wells are now reported making water varying from 1 to 70 per cent.

Three of the wells on the Olds lease were drilled in 1929 and all of the balance on both leases were drilled in 1930. As of May 1, 1934, the condition of production is as follows:

	Clauer lease	Olds lease
Natural flow:		
Through casing	3	3
Through tubing	1	2
Gas lift	6	2
Pumping	5	1
Reconditioning	..	1
Shut down	1	1
	16	10

Most of these wells are finished with 8⅝-inch casing and those not flowing natural enough through casing have a string of 2½-inch tubing run in them.

In planning for securing the balance of the oil that can be economically produced from these wells the management of the Coline Oil Co. has decided to be prepared to take advantage of the service made available in this field by the Oklahoma Gas & Electric Co. and recently signed a contract to cover connections to the power lines of the electric company for 25 wells.

Pumping Installation

The wells are to be pumped by beam and the first installation consists of an O. C. S. outfit with 6-inch shaft and crank mounted on heavy jack post bearings, with double chain sprocket attached to double tug pulley. The outfit as now hooked up will be used for pumping only and pulling rods and tubing for cleanout work will be performed by portable outfit.

This unit is pumping the well from a total depth of about 6,400 feet through 2½-inch tubing with a 1¼-inch working barrel and at eighteen 44-inch strokes per minute is reported to be producing about 100 bbls. of oil daily. This work is creating a demand on the electric power system of about 8 kw.

Electric Gearmotor

The accompanying picture shows the Westinghouse gearmotor that is furnishing the power for operating the O.C.S. pumping unit. The gearmotor has only recently been introduced into the petroleum industry although it has been successfully used for many power purposes in other industries.

The manufacturers observed that with most motor applications some mechanical means is required for reducing the normally high motor speed to satisfactory operating speeds. The gearmotors range in rating upward from one-half horsepower and operating at from 69 to 1,550 r.p.m. is a unit combining motor and helical gears and pinions enclosed in cases that are carried upon one set of base rails and adjustable as one unit.

In the unit installed in Oklahoma City Field the motor and gears are entirely weatherproof and the motor is wound to operate at constant speed of approximately 1,760 r.p.m. with ratings of 40, 25 or 15 horsepower obtained by the use of one of the three motor connections made through plugs and receptical arranged in the motor starter box.

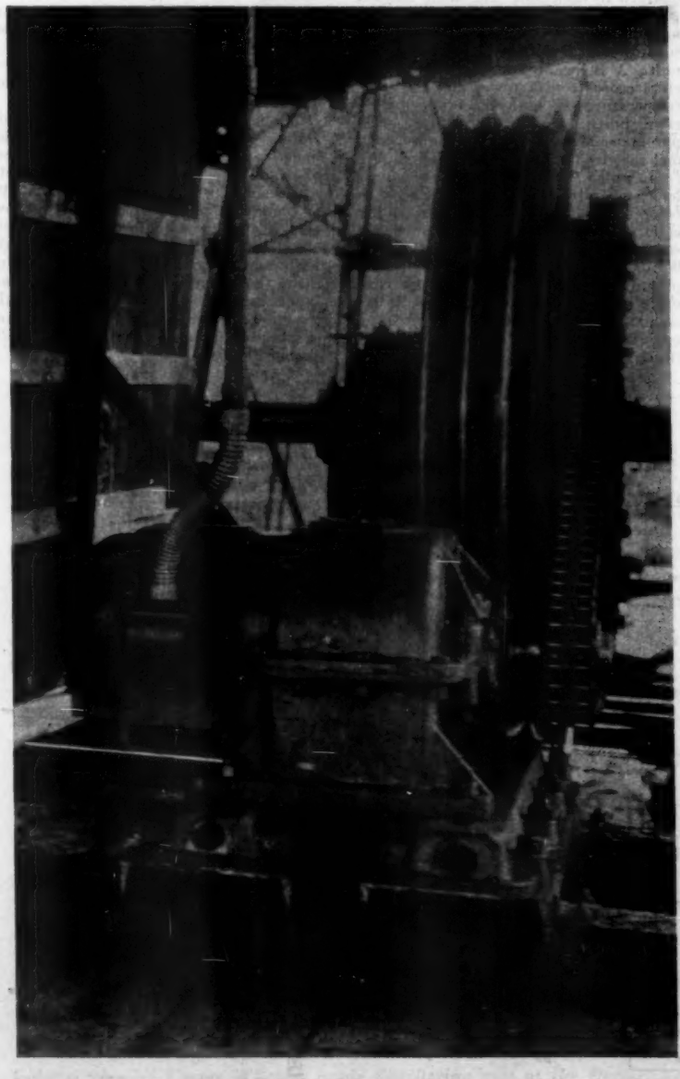
The gearmotor is a combination of a motor and a simple, nonplanetary type double reduction helical gear speed reducer built onto and supported by the frame of the induction motor, or, as in this instance, the motor case is attached to the gear case and the gear case mounted upon the base rails.

This type of power unit permits the driven unit to be coupled direct to the gearmotor or connected by cog belts, chains and sprockets, "V" belts or flat belts, or in any other manner used for general purpose induction motors are suitable.

The gear reducer is simple and compact of the nonplanetary type consisting of helical gears and pinions fully enclosed in a two-section cast iron case. Gear and pinions, with hobbed teeth, are made from .40-.50 carbon forged steel heat treated.

The shafts are carried in roller bearings assuring alignment and high operating efficiency. In the unit shown the output speed of the shaft on which the pinion is mounted is 87 r.p.m. The pinion sprocket has 19 teeth and the driven sprocket on the crankshaft 94, giving a speed of 17.5 r.p.m. to the crankshaft and the same number of strokes to the walking beam.

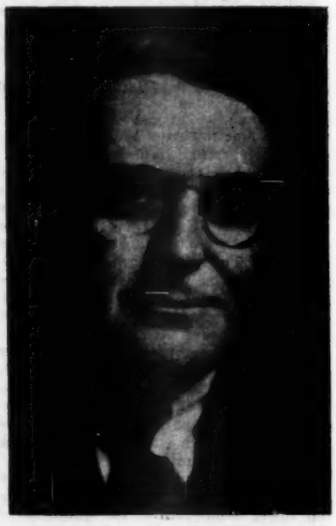
The first unit has been in actual operation for about two weeks and giving good results and it is reported that several additional pumping units of the same type are to be installed shortly.



Gearmotor unit driving O. C. S. pumping unit on a 6,400-foot deep Simpson well in the Oklahoma City oil field

T. O. Grisell Announces Resignation as Secretary

OIL CITY, Pa., Aug. 6.—Resignation of T. O. Grisell as executive secretary of the Pennsylvania Grade Crude Oil Association and his appointment as sales manager of the Kendall Refining Co. of Bradford, is announced. The board of directors of the association is expected to meet Tuesday or Wednesday to consider a successor. Mr. Grisell will replace I. H. Shearer, whose resignation from the Kendall company becomes effective October 1.



T. O. GRISELL

Mr. Grisell was brought to the Pennsylvania Grade Crude Oil Association in August, 1932, as a nationally recognized authority on merchandising and economics. He is a native of Indiana and has been associated with the production and marketing of oil nearly all of his life. He was for seven years director of the marketing department of Batten, Barton, Durstine & Osborne, and served as president of several of the Neidich companies. Mr. Grisell is nationally known for his work on distribution budgets and as a pioneer in the matter of trading area, sales and advertising studies. His book, "Budgetary Control of Distribution," has had wide distribution.

The former executive secretary was a member of President Hoover's committee on cost and distribution when the latter was Secretary of Commerce, and his statistical work led to the development of the Batten index for buying. He is a member of the American Marketing Society. For a time Mr. Grisell was engaged in newspaper work on the West Coast as a writer and editor. His latest connection with the press was in an executive position with the Cleveland Plain Dealer.

Mr. Grisell's work with the association has been outstanding and to his efforts may be attributed a large measure of the success recorded by the Pennsylvania Grade group in the past two years. Mr. Grisell is expected to return to Oil City, August 15, from a fishing expedition in Canada.

U.S.S.R. Operations Running 20 Per Cent Ahead of Last Year But Behind Government Plan

By C. O. WILLSON

With an increase of 15 to 75 per cent in the various phases of activity, the oil industry of the U.S.S.R. the first six months of this year is secure in its position as the second largest of the oil-producing countries. Despite these substantial increases over 1933 and 1932, the operations have not fulfilled expectations as planned for 1934 by the government at the close of last year. To carry out these plans for 1934 it will be necessary for those in charge to greatly expand operations the last half of this year. It does not appear probable that this can be done, although it is known that every effort will be made to stimulate activities over the remaining five months.

The U.S.S.R. operations based on the latest official data available are summarized for June and May of this year, June of last year and the first six months of 1934 and 1933 in the accompanying table. These data show that the U.S.S.R. production the first six months of this year totaled 11,845,300 tons, an increase of almost 19 per cent over the same period in 1933. Expressed in barrels, the average daily production of crude oil the first half year was 458,000 bbls., an increase of 72,000 bbls. daily when compared with the first half of 1933. The government's planned production of crude for all of 1934 has been changed from time to time but it is understood that a minimum of 30,000,000 tons or 210,000,000 bbls. is desired. This would mean a production of approximately 18,000,000 tons or 3,000,000 tons monthly during the last six months of this year. About a year ago the government-controlled industry of Russia had projected a production of 35,000,000 tons for 1934, the second year of the Five Year Plan, with 42,500,000 tons for 1935, 52,750,000 tons for 1936 and 69,200,000 tons in 1937. A less ambitious program was adopted near the close of last year.

Regardless of the official dissatisfaction which has been expressed due to the fact that crude oil production the first six months was only 83.5 per cent of the plan, outside observers have been impressed with the fact that the U.S.S.R. could increase its crude oil production 72,000 bbls. daily over 1933 with an increase of more than 75 per cent in drilling activity. This has been done without the aid of a large amount of heavy drilling equipment from other countries. Late last year it was expected that the U.S.S.R., following recognition of the government by the United States, would make large purchases of American drilling equipment due to the desire to speed up activities and increase crude oil production starting early this year. The inability to arrange satisfactory long-time credit has delayed a large part of this buying and those directing the U.S.S.R. operations have been compelled to rely on old equipment and that now being manufactured at their own plants. Largely the same situation exists in the petroleum refining end of the Russian operations.

Wide Exploration Program

Under the direction of the Geological-Exploration Institute of Moscow during the past three years, geological investigations, including geophysical and topographical operations, have been carried on throughout Russia, including remote sections. Based on these investigations considerable wildcat drilling is under way, indicated in the fact that this type of drilling as shown in the accompanying table is approximately 50 per cent greater than last year. In regard to the results of this drilling, in a paper prepared by Russian technologists and presented at the A.I.M.M.E. annual meeting this year, the following information was given:

"In many sections drilling and production started immediately after the geological explorations. Such locations are: In the Azneft region—Kala, Lok-Batan, Karachukhur, Puta, Kergez, Sulutepe, Nefte-Chala, Neftalan. In the same region the following locations, having shown favorable structures, are being prepared for actual production: Pirsagot, Mardakyani and Zihr. Some of these areas are already celebrated.

"Thus in Lok-Batan, which was discovered in 1932, five large gushers have been completed. The oil produced in this region in 1933 amounted to 646,300 tons. Of still greater significance is the Kala location, also discovered in 1932, the total output of which in 1933 reached 1,100,000 tons. All of the oil of these regions is from the so-called 'productive layer,' the total depth of which is 1,500 meters. Located near well-known productive oil fields of old standing, they have an almost identical cross section. The sand saturation of Lok-Batan is the greatest ever known in the world. In Georgia, a counterpart of the productive depth of the Apsheron peninsula has been formed—the so-called Shirak continental formation—with a normal potentiality of 2,500 meters, of which so far 1,600 have been explored, which contained 23 oil-bearing horizons with an aggregate thickness of 270 meters. Two locations, Mirsanni and Shirocki, have been transferred to the regular production class as some of their wells have flush production and show aboundant evidence of gas. The rest of the fields of Georgia are being wildcatted.

Pumping oil from main reservoir in Lok-Batan, gusher field, Russia

"In Turkmenia, exploration uncovered the region of Nefte dag. The output of gusher No. 13 was 250,000 tons of oil in 16 days, proving that the sand saturation of the western shore of the Caspian Sea is not less than that of the productive strata of Apsheron. Abundant oil and gas seepages and mud volcanies scattered on the huge expanse of the western shore of the Caspian justify the belief that this area will come to the fore in oil riches.

"Middle Asia has not so far given immediate productive results if we do not take into consideration the newly uncovered horizon of 'K' (lower Eocene), the enlarging of all the existing producing fields and the uncovering of Khanabad-Sai proved so far by two producing wells. In the northern Caucasus, the Molgabek region (Grozneft) was discovered and put in production, yielding three gushers with a daily production of 600 metric tons and four oil-bearing strata of great potentials have been found. In the region of the Stara-Grozni was discovered in a sealed state the north wing of the oil-bearing strata of that region. A vast area, the Benoisk fold, having a length of 20 kilometers, was uncovered with a gusher flowing at a daily rate of 400 metric tons. In the near future, the regions of Isberbash and Achi-Sunak, which showed satisfactory signs of oil, will be put in production.

"In the area of Maineft, oil has been

Petroleum Operations in The U. S. S. R. First Six Months of 1934

Preliminary Figures for June, 1934, and Revised Figures for May, 1934

Trusts—	June, 1934	% of plan	May, 1934	June, 1933	6 mos. 1934	% of plan	6 mos. 1933	1934 % of 1933
Production of Crude Oil								
Azneft	1,593,600	88.9	1,601,600	1,268,400	9,238,700	87.3	6,699,500	137.9
Grozneft	280,300	61.3	304,300	408,600	1,892,900	69.3	2,618,700	72.3
Maineft	66,500	74.7	85,800	46,000	422,300	100.8	279,000	151.4
Embaneft	22,100	85.0	22,800	17,300	114,100	92.0	97,700	116.8
Other trusts	32,700	43.2	32,300	32,200	177,300	55.2	284,100	62.4
Total	1,995,200	81.8	2,046,800	1,777,500	11,845,300	83.5	9,979,000	118.7
Drilling (in meters)								
Azneft	67,539	89.7	72,526	35,043	413,681	98.3	230,580	172.7
Grozneft	24,536	91.5	22,101	10,014	128,716	87.9	51,217	251.3
Maineft	4,600	59.6	4,919	3,958	26,457	65.4	17,821	148.5
Embaneft	7,523	78.4	4,549	4,127	19,060	54.5	19,149	99.5
Other trusts	12,577	62.0	13,597	6,936	69,982	73.8	39,394	177.6
Total	116,784	85.3	117,692	60,088	647,896	89.2	367,161	176.5
Consisting of:								
Production drilling	76,612	86.6	79,846	34,071	458,700	91.8	237,345	193.3
Wildcatting in producing areas	24,174	100.4	23,803	15,054	115,541	98.9	79,241	145.8
In new areas	15,998	65.8	14,043	10,963	73,655	71.0	50,575	145.1
Runs to Stills								
Azneft	1,111,000	98.4	1,150,100	1,070,400	6,701,400	100.9	5,909,700	113.4
Grozneft	631,100	75.8	709,800	553,000	3,557,100	76.2	2,974,700	119.8
Aviafuel	9,000	60.0	3,300	9,800	51,900	81.0	75,900	68.4
Oil plants	9,700	110.2	6,000	9,400	52,300	100.6	50,900	102.7
Sredazneft	5,400	74.0	2,500	2,000	19,100	41.1	20,500	93.2
Total	1,766,200	88.6	1,871,700	1,644,600	10,381,800	90.5	9,031,700	114.9
Production of Gasoline								
Azneft	98,300	110.4	89,400	76,900	514,100	94.7	465,700	110.4
Grozneft	152,800	94.5	158,500	149,300	851,000	91.1	840,600	101.2
Aviafuel	1,800	112.5	1,200	2,100	11,700	98.3	11,600	100.8
Sredazneft	580	77.4	250	100	2,030	44.8	1,600	126.9
Total	253,480	100.2	249,350	228,400	1,378,930	92.8	1,319,500	104.5

discovered in the region Khadigensk. Gushers were brought in from the Varenikov, Adagum, Kessler and Kudoko anticlines. In the Emba region, oil was uncovered and operations started in South Iskin, Kos-Chagil, Shubar-Kuduk, Jakshilai and Baichunas. Of these, the first two yielded gushers of the order of 400 tons per day. In the Ural region, exclusive of the newly uncovered oil areas of Ikhta, Chusov-Gorodki, there were also found in 1932 rich new oil deposits in Sterlitamak (Ishimaevo) in an area of 900 hectares with a number of gushers of 400 metric tons initial flow daily."

Maineft Active

This review gives an idea of the scope of new producing operations. Since this summary was made available there have been reports of drilling activities covering some of these areas. New wells have been completed within the proven territories but so far as known no important wildcat discoveries have been made.

Among the several trusts operating in the producing end, Maineft shows the largest increase over last year and its production for the first six months was a little more than 100 per cent of the plan. The Azneft, operating in the Baku area, accounts for more than 75 per cent of the total production with a 38 per cent increase over last year and with a record of 87.3 per cent of the plan. Among the larger trusts, the record of Grozneft is the most disappointing to the government. Its crude oil production for the first six months was only 72 per cent of last year and 69 per cent of the plan. The operations of the smaller trusts also have been below expectations. Some of these trusts operate in the newer territories and so far have not been able to develop the actual production indicated in early exploration work.

Large Increase in Drilling

The first six months of last year there was decided drop in drilling activities. The reports for the first six months of this year, with a gain of 75 per cent, show that this situation has to a large extent been remedied but was still 10 per cent behind the plan. The Azneft has a record of 413,681 meters of drilling, which was almost equal to the plan. Drilling by the Embaneft has run far behind expectations, but despite this fact crude oil output was in excess of last year.

As shown in the able wildcat drilling in Russia so far this year, while showing an increase over last year, is lagging behind the government's program. Most of this drilling is scheduled to take place in sections where geological reports indicate the production of crude oil in commercial quantities. It is largely on these developments that the government expects to increase its production during the next three years with the hope that a production around 900,000 bbls. daily can be obtained by the end of 1937. Recent reports from Russia have reflected the disappointment in the progress along these lines. The delay is said to be largely due to the fact that the manufacturers have not been able to furnish the necessary drilling equipment. There also have been charges that labor has not cooperated 100 per cent in all phases of the producing operations. The same report says these difficulties have been ironed out and the last half of the year should see the completion of important work in new territories.

For the latter part of last year it was predicted that 1934 drilling in Russia would total 1,500,000 meters. The record of 647,896 meters for the first six months is not keeping pace with this schedule.

Refinery Operations

Crude runs to stills and output of refinery products for the first six months of this year ran closer to government plans than did the producing branch. This is no doubt due to the fact that refineries in Russia, as in all other countries, have a capacity in excess of usual runs and can increase their operations readily whenever necessary. The government has a five-year program, which started in 1933, calling for the construction of a large amount of new equipment in its refineries. This program was outlined not so much to add to the rated crude oil capacities of its refineries as to increase plant efficiency and improve quality of products.

Some work has been done on the 1934 program, but it is certain that it is far behind the plans which called for the construction of 62 units during the year, including 12 crude oil topping plants, 3 vacuum stills and 21 various type cracking stills. The first large cracking unit was installed at the Saratov refinery and placed in operation about May 31. This unit has a capacity of 3,500 bbls. of fresh stock daily. It was announced that at the time of its completion that other cracking units were under construction and a total of eight would be built during the year. These units were designed by government engineers and most of the equipment has been fabricated at plants in the U.S.S.R.

The government indicated last year that if satisfactory credit terms could be arranged those in charge of refinery operations would buy American equipment for immediate installation in addition to that designed by their own engineers. The greater part of the crude distilling, cracking and lubricating oil manufacturing equipment now in use in Russia is American equipment installed by American companies prior to 1932. Since that time government engineers have designed most of the small amount of new equipment that has been installed.

For the first six months of this year crude oil runs to stills averaged 403,000 bbls. daily, an increase of more than 50,000 bbls. daily when compared with the daily average for the first six months of 1933. It will be noted in the table that gasoline production in June was 100 per cent of the plan despite the fact that crude runs to stills were only 88.6 per cent of the plan. This is due to the increased recovery of gasoline from the crude oil, reflecting no doubt the expansion of cracking facilities. The yields of gasoline from crude in June were 14.5 per cent compared with a normal percentage around 13.5 per cent. The Russian operations are not directed toward the maximum yields of gasoline for the reason that a better domestic market exists for the kerosene cuts. The kerosene production ordinarily is about 50 per cent greater than the gasoline production.

In the program outlined for 1934 and later years, emphasis is also being placed on increased production of heavier oils which can be used as fuel by railroads and new industries of Russia. It is to supply this domestic demand rather than increase exports that every effort is being made to increase production of crude oil and refinery products. The manufacture of lubricating oils, including finished motor oils as well as steam refined stocks and bright stocks, has greatly increased this year. This has been accompanied by an increase in the production of paraffin wax. All of these products have been offered in increasing quantities in markets outside of Russia.

Bubble Trays for the Fractionation and Absorption of Recoverable Vapors

By DANIEL IRWIN

The primary function of the bubble tray is to exchange heat between a descending liquid or liquids and ascending vapors. When grouped in a tower, the system of trays provides the basic equipment for fractional distillation and for absorption in natural gasoline plants. Also, there is use for the bubble tower in steam power, in refrigeration and in countless other adaptations, as air conditioning, heating, drying and mixing of liquids.

Unlike other equipment used in the refinery, there are little or no comparative efficiency data available as between different types of bubble trays. True, there are claims and logical arguments as to designs and arrangements of bubble tray pans and caps. In lieu of practical and tangible bases of selection of this equipment, the following data may be used to include ordinary ranges of services:

Heat transfer rate: 250 b.t.u. per square foot (net area) per degree F. temperature difference of descending liquids and ascending vapors, per hour. Allowable velocity for vapors in shell of tower; 10-22 feet per second. The lower velocity is preferred.

Allowable velocity of vapors in uptake chimneys of the bubble tray: 10-20 feet per second. The higher value may be safely used. Spacing of trays, clear distance: 12-18 inches. The carry-over of liquid spray from one tray to that above will give an undesirable quality to the liquid on the upper tray in fractional distillation. For absorption, the quality of the liquids on any tray is not important, so that closer spacing of trays may be used.

For the thickness of the shell of the tower the A.S.M.E. "Code for Unfired Pressure Vessels" should govern, for the shell proper, the heads, whether flat, dished or semielliptical, for the attachment of nozzles, and for all openings (reinforcement of shell).

Generally, in the selection of a bubble tower, after the determination of the number of plates by the theoretical calculation, it is a compromise between the actual requirements and mechanical consideration of the fabrication, assembly and transportation of the tower. There is another consideration, price, that will be discused later on.

Types of Trays

The types of bubble trays illustrated will cover practically all the conventional and patented types. Patents protecting bubble trays have to do with: (a) arrangement of the tray, as to position of caps and flow of liquids and vapors; (b) positions of liquid overflow; (c) design of bubble caps, shape, holes and serrations; (d) liquid connections to the trays; (e) methods of support of trays.

Figure 1 shows the conventional or simplest type. This may include holes of slots for vapor uptakes with individual bubble caps or long inverted pans. The liquid overflow passes over and down a weir plate. Figure 2 shows a multiple contacting type of bubble cap, with the liquids overflowing down a pipe. One design uses a diagonal pipe to give a larger weir area for the overflow and to direct the liquid flow in one direction for all plates. Figure 3 shows a tray and bubble cap that is adaptable to small diameters and claiming various improvements, including a combination of supports and liquid or instrument channels from the outside to the trays, through the shell of the tower.

As stated before, in the absence of comparative performance data, the selection of the bubble tower has often been a matter of price per pound of metal; notwithstanding that it is the basic equipment and critical part of the cracking, fractional distillation and absorption processes. Furthermore, of all equipment, the bubble tower receives the least attention until it either fails to function, leaks too badly or becomes involved in accident.

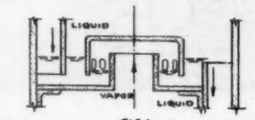


FIG. 1

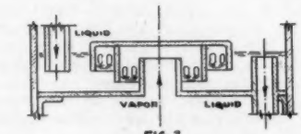


FIG. 2

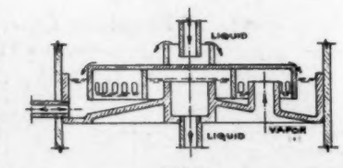


FIG. 3

Sections of bubble trays

The bubble tower is usually the least suitably equipped, with instruments and connections to indicate and to control its operation, of all parts comprising a unit in the refinery. Even after six or seven years since its practical introduction to the refining industry, the modern bubble tower is often treated as an oversize dephlegmator. The dephlegmator, as we knew it, was just a liquid trap to "knock back" entrained liquid particles in the overhead vapors. The bubble tray and tower is a complete distillation element that is capable of separating the various components of petroleum in liquid phase; the separation being in accordance with the various boiling points of the components. For absorption work, the elementary operation is to remove the heat of vaporization of the light petroleum gases and condensing them in a cooler and heavy liquid, this liquid usually but not necessarily being a petroleum product.

C. E. BOWLES DIES

Charles E. Bowles, 62, statistician and petroleum analyst, died of heart trouble at his home in Tulsa last week.

A native of Ohio, he came to Tulsa from Milwaukee, Wis., in 1921. He was for a time a member of the firm of Foster & Bowles, Inc., consulting engineers, and later was associated with W. E. Brown in the oil business. Subsequently he became Tulsa representative of the Oklahoma State Chamber of Commerce, during part of 1926 and 1927 and was connected with the publication, "My Oklahoma." He was publicity and convention secretary of the Tulsa Chamber of Commerce from May, 1928, until November, 1928. He joined the Independent Petroleum Association of America as statistician in May, 1930, continuing until June, 1932.

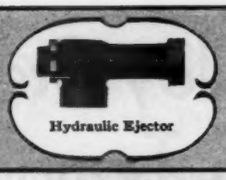
During his residence in Tulsa he also had been associated with the Mid-Continent Oil & Gas Association as an assistant secretary.

Before coming to Tulsa he had been connected with Seyller & Co., of Milwaukee, in the oil and gas stock business. In addition to numerous magazine and newspaper articles, he had written a book 10 years ago entitled, "The Petroleum Industry."

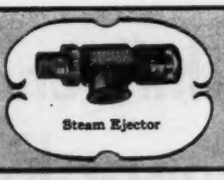
TO REDEEM DEBENTURES

NEW YORK, Aug. 6.—The Humble Oil & Refining Co. will redeem on October 1 all its outstanding debentures at 102 per cent of the principal amount. This will retire the corporation's entire funded debt, amounting to $18,950,000 in 5 per cent debentures. An issue of about $22,000,000 in 5½ per cent debentures matured in 1932, and was paid.

The outstanding 5 per cent debentures do not mature until April 1, 1937, but are callable at any interest date upon 60 days' notice, at 102 and interest. After the debentures have been paid, the capitalization will consist solely of about 9,000,000 shares of capital stock.


Hydraulic Ejector

PENBERTHY PRODUCTS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"Safeguard" Automatic Liquid Level Gage

Automatic Injector

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HERE is a water and liquid level gage that has no superior in design, materials and workmanship. It is used where only the best is good enough—and it has frequently proved the least expensive in the long run.

Ball type safety valves are located in each gage arm to automatically and positively close when the glass is broken. Ball in lower valve must be lifted to seat and cannot close unless glass breaks; this absolutely prevents a false water level from being shown. The shut-off valves are arranged for easy regrinding. Packing glands prevent any torsional stress on glass when packing nuts are drawn down.

The gage arms are self-cleaning. The glass is offset from stems for cleaning from either end without loosening glass packing or valves. A separate drain valve, union nut and tail are furnished; valve can be connected directly to gage or placed wherever most convenient.

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Spring Compression Grease Cup

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Screw Plunger Grease Cup

Factors Influencing Creep of Alloy Steels Used in Refinery Equipment at High Temperatures

By A. E. WHITE,[1] C. L. CLARK[2] and R. L. WILSON[3]

Research men and designing egineers interested in the subject of creep have often had occasion to express concern over the apparent lack of agreement in test results obtained from different laboratories on steels of approximately the same chemical composition. When it is considered, however, that creep is an extremely sensitive property greatly influenced by slight differences in the history of the material or in the testing procedure employed, it is not surprising that reslults do not agree merely because one variable, such as the composition with respect to the more common elements, has been kept constant.

Owing to the complexity of the subject, information is not available concerning all the possible variables and, in fact, probably all the variables are not as yet even known. Those to be considered in the present discussion are: Chemical composition, method of manufacture, heat-treatment, grain-size, temperature of recrystallization, cold working, and testing procedure. The A. S. T. M.-A. S. M. E. Joint Research Committee has recently proposed a tentative method of test for long time (creep) high-temperature tension of tests of metallic materials, which should aid greatly in eliminating the discrepancies in results due to testing procedure. Nevertheless, certain variables in regard to testing procedure should be considered, in order to emphasize the importance and necessity of a standard testing method if the results of several investigators are to be comparable.

Chemical Composition

Until quite recently the belief was held by many that all the low-alloy steels of the pearlitic type possessed the same creep characteristics, especially at temperatures of 800 to 100° F. And further, if superior creep-resisting characteristics were required, it was necessary to resort to highly-alloyed austenitic steels, such as the 18 per cent chromium —8 per cent nickel type, or the feritic chromium steels of the 18 per cent chromium type.

Almost every one will now agree that a wide range of creep characteristics may be obtained at temperatures up to 1,100° F. or 1,200° F. with pearlitic steels, depending on their composition. The desired operating temperature determines the most suitable composition. For temperatures below the lowest temperature of recrystallization the creep resistance may be increased by the addition of elements which largely enter into solid solution with the ferrite, such as nickel and manganese, as well as by the addition of carbide-forming elements, such as chromium, tungsten, molybdenum and vanadium. The carbides of these elements are located within the crystals as well as the grain boundaries and exert a keying action along the crystallographic planes that decreases the tendency to creep.

At temperatures above the lowest temperature of recrystallization, the elements most effective in increasing the creep resistance of pearlitic-type steels are those forming carbides. As it is felt that creep occurs at these temperatures largely as a result of the movement of crystals with respect to one another, rather than as a result of slipping within the crystals themselves, the effectiveness of the carbide-forming elements in reducing creep is believed to be due to the fact that a large number of carbide particles are located at the grain boundaries thus restraining the relative movement of the crystals.

Certain alloying elements may also improve the creep resistance at a given temperature by increasing the lowest temperature of recrystallization. Since creep and the lowest temperature of recrystallization, or equi-cohesive temperature, appear to be closely connected, any element which increases this temperature will also increase the creep resistance at temperatures above it. Very little is known about the effect of the addition of alloying elements upon the lowest temperature of recrystallization. This is a field that should receive considerable attention in the immediate future.

The creep characteristics of several pearlitic alloy steels at temperatures of 800 to 1200° F. are given in Table I. The creep characteristics are expressed in terms of the stresses required for creep rates of 1 per cent per 100,000 hours, 1 per cent per 10,000 hours and 1 per cent per 1,000 hours. While a large number of such values could be given, those in the table suffice to show the wide range in creep strength to be obtained from steels of the pearlitic type. They also indicate that the steels possessing the highest creep strength, especially at 1,000 and 1,200° F., are those containing carbide-forming elements. The differences between the steels at 1,200° F. are not as marked as at 800 or 1,000° F., but are significant even at the higher temperature. For example, on the basis of per cent creep per 10,000 hours, DM steel is nearly four times as resistant to creep at 1,200° F. as MM9 steel and over 1½ times as strong as the 4-6 per cent chromium—0.50 molybdenum steel.

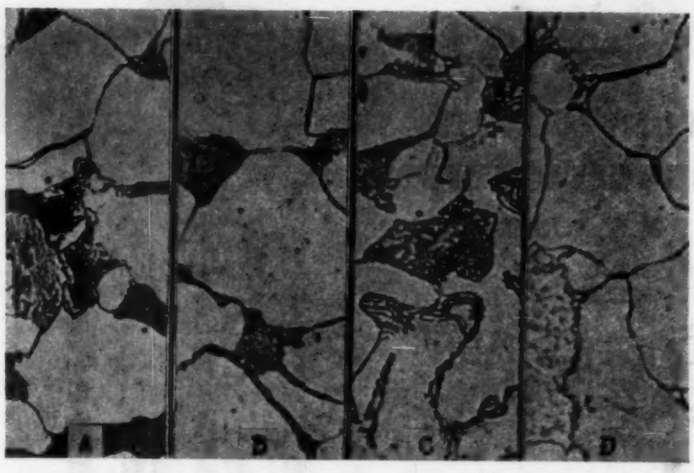


Fig. 1—Metallographic structures produced in a 0.15C. steel by four different heat-treatments X 1000

(A) Hot-rolled. (B) Normalized 1,725° F.; tempered 1,200° F. (1 hour). (C) Annealed 1,650° F. (D) Normalized 1,725° F.; tempered 1,200° F. (168 hours)

Variations in Composition

In any type-series of pearlitic alloy steels, slight variations in composition have been found to influence the creep strength greatly. This is illustrated in Table 2 by the creep charactristics at 900° F. of a group of manganese-molybdenum steels differing principally in manganese content. The amount of this element varied from 1 to 3 per cent.

The highest properties are shown by the alloy containing 1.25 per cent manganese and the lowest by the one containing 2.99 per cent. In other words, the maximum creep resistance for any given series of steels is not necessarily exhibited by the alloy containing the greatest amount of alloy addition. In fact, the available information indicates that in order to obtain the maximum creep resistance, a specific amount of the particular element must be present. The point is further substantiated by the data given in Table 1. The steels designated as DM and Cr-Mo differ mainly in that Cr-Mo steel possesses a greater cromium content. On the other hand, the creep resistance of DM steel is distinctly superior.

The pearlitic alloy steels are a moderately-priced class of materials in which good creep strength can be found for various temperatures up to 1,200° F. Their low alloy content, however, exposes them to disintegration by corrosion and oxidation. Some of the steels have relatively better corrosion and oxidation resistance than others, evidently as a result of chemical composition. At temperatures between 1,000° F. and 1,200° F., which is virtually the limit of practical application of the pearlitic steels for slow rates of creep, the serviceability of a material may be greatly diminished by the scale loss due to continual heating of the metal under stress. The interesting possibility is then suggested of broadening the province of steels with high creep strength and mediocre oxidation resistance at these temperatures through aluminum-treatment of the surface by the calorizing process. In this manner protection against surface oxidation is combined with high creep strength in an inexpensive base metal. Conversely, the effectiveness of a calorized coating may depend upon the creep resistance of the underlying steel. A calorized surface must remain unbroken if it is to resist oxidation. This would not happen in a highly stressed member unless the base material had sufficient resistance to creep. Otherwise, creep of the base metal would cause cracks in the calorized coating, which would destroy the continuity of the protective covering.

At temperatures exceeding 1,200° F. the creep strength of all pearlitic steels is relatively low; it may then be expedient to use the highly-alloyed austenitic steels whenever good creep strength is required. The creep characteristics of all austenitic steels at any stated temperatures are not the same and an appreciable range in creep strength values is offered depending upon the composition of the alloys. In the application of austenitic alloys for temperatures higher than 1,000° F., the possible loss of corrosion resistance due to intergranular carbide precipitation must be anticipated. Some-

(Continued on Page 33)

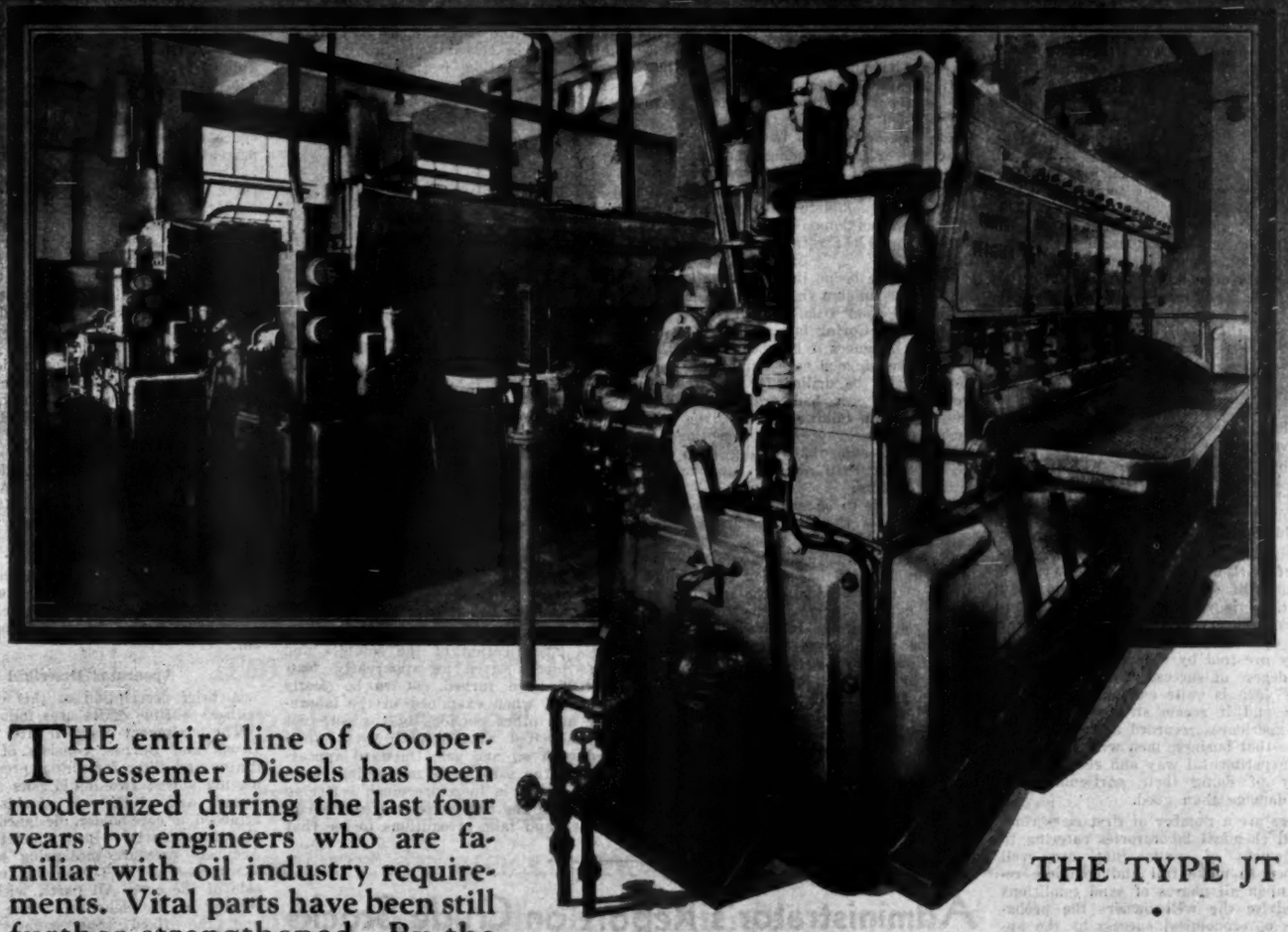
TABLE 1—CREEP CHARACTERISTICS AT ELEVATED TEMPERATURES OF SEVERAL PEARLITIC STEELS

Steel—	C	Mn	Si	Cr	W	Mo	Ni	V	Heat treatment	Temp., deg. F.	Stress for designated rate of creep— 1 per cent 100,000 hrs.	1 per cent 10,000 hrs.	1 per cent 1,000 hrs.
Carbon	.15	.50	.20	...	...	...	...	...	N.T. 1,200° F.	800	13,000	15,000	25,000
DM	.07	.42	.72	1.25	...	.54	...	...	Ann.	800	30,000	39,500	42,500
Cr-Mo	.10	.45	.18	5.09	...	.55	...	...	Ann.	800	14,250	22,000	34,000
C-Mo	.16	.49	.30	...	...	.49	...	...	Ann.	800	21,500	27,000	34,000
MM9	.15	1.28	.29	...	...	.38	...	...	N.T. 1,200° F.	800	25,500	34,000	45,000
17-22	.45	.47	.77	1.40	.98	...	...	.25	N.T. 1,300° F.	800	48,000	68,000	94,000
Carbon	.15	.50	.20	...	...	...	...	...	Ann.	1,000	3,200	6,800	14,500
DM	.07	.42	.72	1.25	...	.54	...	...	Ann.	1,000	15,000	24,000	37,500
Cr-Mo	.10	.45	.18	5.09	...	.55	...	...	Ann.	1,000	7,000	10,250	12,900
Cr-W	.08	.42	.20	4.88	1.10	...	...	...	Ann.	1,000	5,650	8,400	12,500
C-Mo	.16	.49	.30	...	...	.49	...	...	Ann.	1,000	9,500	15,800	26,000
MM9	.15	1.28	.29	...	...	.38	...	...	N.T. 1,200° F.	1,000	4,650	9,800	21,000
17-22	.45	.47	.77	1.40	.98	...	...	.38	N.T. 1,300° F.	1,000	13,750	24,000	42,500
4,140	.40	.60	.25	.92	...	.18	...	...	O.Q.T. 1,140° F.	1,000	3,700	7,400	15,000
Cr-Ni-Mo	.39	.68	.27	.72	...	.32	1.74	...	O.Q.T. 1,125° F.	1,000	.....	750	13,500
4,615	.14	.52	.28	...	...	.35	1.85	...	N.T. 1,200° F.	1,000	4,600	7,700	13,000
3,140	.38	.80	.26	.56	...	...	1.33	...	O.Q.T. 1,000° F.	1,000	190	1,000	5,250
6,140	.40	.75	.21	1.01	...	...	...	.17	O.Q.T. 1,200° F.	1,000	1,400	3,900	8,800
DM	.07	.42	.72	1.25	...	.54	...	...	Ann.	1,200	1,950	2,950	5,100
Cr-Mo	.10	.45	.18	5.09	...	.55	...	...	Ann.	1,200	900	2,500	5,250
C-Mo	.16	.49	.30	...	...	.49	...	...	Ann.	1,200	780	1,650	3,550
MM9	.15	1.28	.29	...	...	.38	...	...	N.T. 1,200° F.	1,200	420	1,000	2,400
17-22	.45	.47	.77	1.40	.98	...	...	.25	N.T. 1,300° F.	1,200	540	1,200	2,650

Ann.—Annealed. N.T.—Normalized and tempered. O.Q.T.—Oil quenched and tempered.

1. Director of Engineering Research, University of Michigan.
2. Research Engineer, Department of Engineering Research, University of Michigan.
3. Metallurgical Engineer, Timken Steel & Tube Co.

COOPER-BESSEMER DIESELS ARE MAKING GOOD IN THE OIL INDUSTRY



THE entire line of Cooper-Bessemer Diesels has been modernized during the last four years by engineers who are familiar with oil industry requirements. Vital parts have been still further strengthened. By the judicious use of modern materials weights have been reduced. Working parts have been made more accessible. Fuel injection systems have been simplified. In fact the new Cooper-Bessemer patented atmospheric relief injection system represents a long foward step in Diesel engine development.

There are now Cooper-Bessemer Diesels with enviable operating records in refineries, on oil pipe lines, driving electric generators, on Diesel electric drilling rigs, driving water pumps and on beam pumping. From 25 to 1200 H.P. there is a Cooper-Bessemer Diesel especially designed for nearly every oil industry job.

THE TYPE JT

•

Seven 340 H. P. type JT-6-cylinder Diesels installed in three separate stations drive electric generators on an oil line in East Texas. The service is continuous and the interruptions very few.

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Laboratory Study of Formation Cuttings and Cores Will Help Solve Many Production Problems

By L. G. E. BIGNELL
Petroleum Engineering Editor

With the marked success in the acid treatment of oil, gas and water wells producing from limestone formations and the maintained relatively higher price for oil in all fields there is a tendency on the part of operators having wells producing from sand formations to investigate all promising methods of increasing their production. Quite recently it was reported that some operators in the Pennsylvania fields were introducing 200 or 300 pounds of caldium carbide into the bottom of their sand wells and adding water to generate heat that would tend to remove the paraffin from the face of the sand in the hole.

This is nothing new and calcium carbide and water and a number of other heat producing chemical combinations have been tried or suggested in the past with varying results. It is reported that 1 pound of calcium carbide will generate about 200 British thermal units of heat. This chemical is quoted at about 6 cents per pound in the Mid-Continent area and probably less in the Eastern fields.

There has not been enough of this kind of work done to prove whether such treatment of wells producing from sand formations is economical and really increases recovery. It is predicted that many operators will try the experiment if they are told by others that they had some degree of success. This "follow-the-leader" idea is quite common in this industry and it seems strange that with past experiences recorded in so many instances that business men will follow this blind experimental way and risk the possibility of doing their particular well more damage than good.

There are a number of first class commercial chemical laboratories catering to the owners of wells that are well equipped to make full and complete reports upon all phases of sand conditions and advise the well owners the probabilities of economical success by the application of treatment to his wells. But it is necessary to pay the owners of these laboratories a fee for their work and advice and many well owners think this the height of folly because they can try out some experiment suggested by some acquaintance or friend for a relatively small sum of money.

Some operators honestly believe that advice by technicians is not worth what it costs but at the same time these same persons will criticize large companies for many things and fail to realize that their success has been brought about largely because those companies have followed the advice of technical men on their staffs.

Study of Sand Cores

In the production of oil it is quite true that one man can see just as far into the ground as another. In other words there are many things that have to be taken for granted or decisions made based upon assumptions of certain conditions. It is admitted that there are many underground data that are very difficult to secure. Also that many data that can be secured by the use of special apparatus and instruments cannot be applied to the small wells simply because the costs are prohibitive, or too high when measured in values of the well's productive capacity.

While these things are all true there is no legitimate excuse for the owners of small wells neglecting to take advantage of many improved methods of determining bottom hole conditions and having some definite program outlined before starting reconditioning their properties.

It is possible for operators to secure good cores from either cable tool or rotary drilled holes. In many instances decision has been made to proceed with a program of repressuring that requires the drilling of additional wells on the lease. In such instances it is possible to secure very complete and reliable cores from such portions of the hole as have bearing upon the future problems in reconditioning.

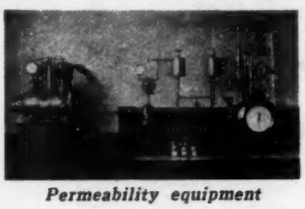
It must be borne in mind at all times that the technician in the laboratory can never get good results from poorly selected cores. Coring is not expensive and in many instances it has been found that by the use of good core barrels the hole can actually be drilled for less than it would have cost had ordinary drilling methods been followed. It is true that such experiences are the exceptions to the general rule that coring does cost slightly more than straight cable tool or rotary drilling.

If money is to be spent for coring, and this is one of the first essentials in securing reliable data upon which to base future operations, care should be taken in drilling the section from which samples are desired and the instructions of the manufacturer of the core barrel should be carefully followed because it must be remembered that all manufacturers still in this business have succeeded in surviving some very keen competition and have by the process of elimination gained much valuable knowledge of their business and this experience is available to those who desire to use their equipment.

Handling Cores

The whole core should be marked in such a manner as to be readily and definitely identified and delivered to the laboratory in as fresh a condition as possible. The parts of the core that show oil should be wrapped in oiled paper and then placed in grease tins that have been carefully cleaned with gasoline, or these portions of the core can be sent to the laboratory in closed fruit jars.

This precaution is recommended because the light portions of the oil and the gas that may have been in the formation when cored will quickly escape to the atmosphere if left unwrapped. Furthermore it is usually better to so treat practically all of the core recovered in this way because it is not safe to allow the selection of parts of the core that are to be submitted to the laboratory to the field men. This does not imply that the field men are not competent to judge of the character of the core selected but rather that the men in the chemical laboratories have better facilities for making such decisions and selecting those portions of the core best suited for the tests to be made later.



Permeability equipment

It has been found that casual field examinations of cores have led to the errones classification of the samples and some pieces saved as apparently "saturated" have turned out to be poorly saturated when examined in the laboratory and other portions of the core not so designated were actually well saturated with oil and gas. Outward appearance of the samples is misleading sometimes and it is therefore much better to submit all the core recovered to the laboratory and take precautions to see that it reaches there in good shape rather than attempt selection in the field.

One of the most important things to be determined in a laboratory test is the permeability and porosity of the sample submitted. These two qualities of sandstones tell much of their probable reactions to various treatments that may be applied to increase the recovery of oil or gas. Permeability is the capacity of the rock to conduct liquids or gas under pressures. Porosity is the relative pore space in the sample and is expressed in percentage of total volume of the sample.

There are many methods for making these determinations and the late Dr. A. F. Melcher of Tulsa was one of the pioneers in this line of investigation. His work has been described in various technical papers and publications of the U. S. Bureau of Mines and U. S. Geological Survey, with which departments he was connected at various periods during his lifetime.

It is only natural that others who have followed this line of investigation should develop other methods and special equipment for this research work. G. H. Fancher, J. A. Lewis and K. B. Barnes in an article entitled "Some Physical Characteristics of Oil Sands" published in the Pennsylvania State College, Mineral Industries Experiment Station Bulletin No. 12, p.p. 65-171, in 1933, have fully outlined one of these pieces of equipment.

Roy L. Ginter, of the Ginter Chemical Laboratory, Tulsa, in conjunction with S. F. Mauney, Jr., chief chemist for the Carter Oil Co., Tulsa, has developed the apparatus shown in the accompanying cut.

Apparatus Described

A brief description of this equipment with an outline of its uses follows:

The equipment designed after Fancher, Lewis and Barnes, consists of a dehydrator and filter for air; a pressure regulating valve; two liquid pots for oil or water; and at the end of this train is attached a core-holder, designed to handle three-quarters inch diameter cores. Accurate pressure measuring equipment is attached at the Tee on the "upstream" side of the core. All parts, with the exception of the dehydrator, are of brass and the fixed pipe connections are soldered. If air is used as a medium, then a wet flow meter can be attached at the discharge of the core-holder, provided the core is reasonably permeable and in case the formation is tight the air delivered through the core can be measured over water. The compressor has a working pressure of 150 pounds.

The viscosity in the permeability formula brings about the same value whether the medium used is oil, water or air. However air is to be recommended because with time, the flow rate of oil drops due to a change of the viscosity and with some sands, containing clay, the flow rate of water drops due to the swelling of the clay.

Administrator's Report on Crude Stocks

Stocks of domestic and foreign crude petroleum at the close of the week ended July 28, totaled 341,313,000 bbls., a decrease of 1,298,000 bbls. from the total of 342,611,000 bbls. on hand at the end of the preceding week, Harold L. Ickes, Secretary of the Interior and administrator of the code of fair competition for the petroleum industry, announced today. This decrease, which followed a comparable decline during the previous week, comprised a decrease of 973,000 bbls. in stocks of domestic crude and a decrease of 325,000 bbls. in foreign crude stocks.

Current reports of the industry for the week ended July 28, in comparison with those for the previous week, indicate that daily average crude oil production declined approximately 50,000 bbls., that imports doubled, and that runs to stills increased about 35,000 bbls. daily. The indicated balance of crude oil for the week ended July 28 was as follows (barrels): Production, 2,610,000; imports, 87,000; decline in stocks, 185,000; equals runs to stills, 2,625,000; exports, losses, etc., 257,000.

CRUDE PETROLEUM STOCKS REPORTED BY COMPANIES HOLDING 100,000 BBLS. OR MORE

Grade of crude oil—	Stocks held by reporting companies July 21, 1934 (bbls.)	Stocks held by reporting companies July 28, 1934 (bbls.)	Change from July 21, 1934 (bbls.)
Pennsylvania Grade	4,676,000	4,696,000	+20,000
Other Appalachian, including Kentucky	1,225,000	1,188,000	—37,000
Lima-Northeast Indiana-Michigan	1,471,000	1,445,000	—26,000
Illinois-Southwest Indiana	11,362,000	11,356,000	—6,000
North Louisiana and Arkansas	10,665,000	10,447,000	—218,000
West Texas and Southeast New Mexico	29,151,000	29,138,000	—13,000
East Texas	39,802,000	39,480,000	—322,000
Other Mid-Continent	160,815,000	160,641,000	—174,000
Gulf Coast	17,704,000	17,657,000	—47,000
Rocky Mountain	27,816,000	27,846,000	+30,000
California	34,153,000	33,973,000	—180,000
Total domestic crude	338,840,000	337,867,000	—973,000
Foreign crude	3,771,000	3,446,000	—325,000
Total crude	342,611,000	341,313,000	—1,298,000

DEATH OF JUDGE W. R. BOYD

Judge W. R. Boyd, father of W. R. Boyd, Jr., executive vice president of the American Petroleum Institute, died at his home in Teague, Tex., Sunday, August 5. Judge Boyd was 78 years old and had been a practicing attorney for 45 years. Due to ill health he resigned as judge of the Eighty-seventh District Court of Texas two years ago.

W. R. Boyd, Jr., left New York, Saturday to be at the bedside of his father. Funeral services were held Monday afternoon.

"Some East Texas refiners are shut down because they realize it is impossible to make money on refined products with posted crude price at a dollar"
—CHICAGO JOURNAL OF COMMERCE, July 25, 1934

That's true—skimming dollar crude is poor business and it usually makes poor gasoline

Dubbs cracking is the way to make gasoline whether crude oil is a dime or a dollar because Dubbs cracking makes the biggest yield of the best gasoline from any charging stock at lowest cost, royalty and all

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NEWS FROM FOREIGN LANDS

GREAT BRITAIN

Imports of crude oil and refinery products in the United Kingdom totaled 238,356,000 Imperial gallons in June, according to official figures. This represents a gain of 31,372,000 Imperial gallons or 15 per cent when compared with the total for June, 1933.

This June total marks a continuance of a development in which imports of crude and refinery products have shown a consistent gain over the corresponding month of last year reflecting an increased consumer demand for petroleum products in the United Kingdom. The figures for the entire six months of 1934 and 1933 are as follows: (data in Imperial gallons).

	1934	1933
Crude oil	250,358,000	192,645,000
Gasoline	551,239,000	546,777,000
Kerosene	109,276,000	89,058,000
Lubricating oil	51,464,000	48,422,000
Gas oil	66,661,000	56,778,000
Fuel oil	302,213,000	273,765,000
Other oils	11,736,000	7,748,000
Total	1,341,947,000	1,214,203,000

This gain of 11 per cent the first six months of this year was fairly evenly divided among the products and crude oil. The gain of 58,000,000 Imperial gallons or 30 per cent in crude oil imports shows that refiners in the United Kingdom have increased their crude runs to stills. However, despite these increases the United Kingdom as a unit still secures approximately 80 per cent of its finished products from outside refineries. Among the refinery products the percentage gain in kerosene was larger than any of the other products.

In estimating consumption in the United Kingdom based on these imports it is necessary to take into consideration the re-exports which totaled 33,178,000 Imperial gallons the first six months of 1934 and 19,733,000 gallons the first half of 1933. Subtracting these exports and the available data indicate that the actual gain in consumption of petroleum products the first six months was approximately 10 per cent.

There has been considerable shifting in the sources of supply for these imports into the United Kingdom as shown in the following table given the shipments by countries for the first six months of 1934 and 1933: (data in Imperial gallons).

	1934	1933
Dutch West Indies	430,341,000	359,316,000
Persia	286,986,000	269,705,000
United States	180,021,000	182,313,000
Mexico	83,692,000	74,435,000
Rumania	82,264,000	101,493,000
Russia	36,743,000	41,464,000
Du.ch East Indies	25,941,000	14,001,000
Br. West Indies	20,312,000	13,436,000
Venezuela	3,034,000	6,348,000
Other countries	192,513,000	151,137,000
Total	1,341,947,000	1,214,203,000

These totals show that the Dutch West Indies — principally refinery products coming from Venezuela crude oil—is a much greater factor in the United Kingdom market than last year. Persia, Mexico, Dutch East Indies and British West Indies have also had increases while the United States, Russia and Rumania are not as large factors as they were last year.

IRISH FREE STATE

With government approval, plans are under way calling for the construction of a refinery at Haulbowline, Cork Harbor, which will have a capacity of several hundred barrels daily. The plant is expected to furnish approximately 3,000,000 imperial gallons of motor fuel yearly. The government has reserved this quantity of the country's total consumption for the refinery. Harold Moore, with offices in London, has been retained to design and build the refinery. The plant will be operated by a newly organized company known as the Cork Harbor Oil Wharves, Ltd., in which British companies having crude oil production and marketing facilities are interested.

NEWFOUNDLAND

With the expiration of the monopoly granted to the Imperial Oil, Ltd., on July 1 in Newfoundland, the government is continuing the policy of imposing duties on imports for the purpose of revenue. The following duties apply: (per imperial gallon)

Naphthas for manufacturing purposes and cleaners' solvents	$0.04
Kerosene and all illuminating oils including duty on package	0.09
Gasoline and motor spirit of all grades including duty on package	0.09
Crude petroleum and fuel oil	0.04
Lubricating oil when imported in bottles, tins or packages each holding less than 1 gallon	45%
Lubricating oil, n.e.s.	0.15

The usual sales tax and surtax on goods imported are not levied in the case of petroleum products.

BAHREIN ISLAND

According to reports of the past week, the League of Nations at Geneva has refused to recognize the claim of the Persian government to sovereignty over the Bahrein Island. The Standard Oil Co. of California, following a concession obtained several years ago from English interests, discovered oil in 1932. Since that time it has been carrying on an important development program indicating that the island in the near future will become a large producer of crude oil.

The Persian government recently protested to the League of Nations claiming sovereignty over the island. If this contention had been recognized the action in effect would have voided the Standard concession.

EGYPT

The Egyptian government is expanding its refinery operations at Suez so that the yearly crude oil capacity will be approximately 300,000 bbls. or a little less than 1,000 bbls. daily. To take care of this increased capacity additional crude oil is being purchased. It is said to be the plan of the government to ultimately expand its refinery capacity so that the plant will furnish all the products required for domestic consumption.

During 1933 the Egyptian government purchased 10,000 metric tons of crude oil, half of which was furnished by the Shell interests and the remainder by the London agents of the American concern.

ITALY

The Societa Petrolifera Italiana, one of the largest locally owned producing and refining organizations in Italy has completed improvements at its refinery located at Fornovo Taro, Italy, and the plant now has a capacity of 1,000 bbls. of crude oil daily. In addition to increasing the capacity of the plant including the installation of towers, the improvements include a new head office building, living quarters, workshop and storehouse. The refinery in 1933 refined approximately 140,000 bbls. of crude oil which was the same as the 1932 operations.

Showing the production situation in this section of Italy the 1933 annual statement of the company recently issued, said in part: "The year 1933 saw the completion of work in the fields, the results and importance of which compare very favorably with those of last year. However, it may be pointed out that, in spite of the many operating economies introduced throughout the year, the unit cost of production has increased, due principally to greater depths to be reached in the new wells. Such wells were recommended by the Geological Department in an endeavor to discover more prolific sands at deeper depths, the upper producing horizons having shown signs of exhaustion.

"During 1933, 25 wells were completed and put on production as compared with 20 wells in 1932. Besides during 1933, two old wells were deepened without results. Summing up the drilling totaled 34,057 feet in 1933 which compares with 34,622 feet in 1932.

"The program of work for all the fields as outlined at the beginning of the year was successfully carried through, despite the numerous difficulties faced by the staff. The difficulties were principally in connection with the development of the Salsomaggiore district, the oil reserves of which are beginning to worry the company somewhat.

"In the new Voghara district operations were confined to the single exploration well which is progressing slowly on account of the careful geological records which are being collected. Applications were made during the course of the year for new research areas, some of which have already been granted. These new areas enable the company's geological staff to carry through its investigations there and eventually begin exploration work with the bit. Upon the recommendation of the geological department the company abandoned a number of old areas as being unworthy of further consideration."

Government Ruling

The attitude of the producers regarding the recent rulings of the Italian government in regard to new taxes is reflected in the following closing statement of the company:

"Before closing this report we cannot help mentioning the recent decree issued by the Italian government which entirely changes the petroleum fiscal regime existing heretofore to the disadvantage of local producers thereby offering a serious cause for apprehension to the shareholders as to the prospects of the company. We have pleasure in assuring, however, that everything possible has been done by the board to alleviate in part at least the application of the new law to our industry. The present stage of our negotiations point to favorable outcome in this matter as the Fascist government has promised verbally to take definite steps in order to safeguard the prosperity and life of our company."

General view of the Fornovo Taro (Parma) Italy refinery of the Societa Petrolifera Italiana. The plant was recently enlarged to 1,000 barrels daily with other improvements. Company's main offices are shown in background

TRINIDAD

The recently issued "Economic Survey of the Colonial Empire" of the Colonial office of the British Empire gives considerable detail regarding the operations and ownership of the oil industry in Trinidad, which is the largest producer of crude petroleum within the Empire. The report shows that 16 companies are actively engaged in the various phases of operations holding 147,000 acres of Crown land under licenses and leases of which 125,000 acres were obtained under mining leases. At this time, land for oil operations is held under three differenent titles. In one case there is complete private ownership, a second in which the ownership of the land is private but the oil rights reserved to the Crown, and third, cases in which both the land and mineral rights are held by the Crown.

The survey lists the following operating companies: Trinidad Leaseholds. Ltd., Apex (Trinidad) Oilfields, Ltd., United British Oilfields of Trinidad, Ltd., Trinidad Lake Petroleum Co., Ltd., Trinidad Petroleum Development Co., Ltd., Trinidad Central Oilfields, Ltd., Kern (Trinidad) Oilfields, Ltd., Fyzabad Dome Oilfields and Siparia Trinidad Oilfields. Part of the crude oil produced by these companies is refined at plants located in Trinidad and the remainder is exported. The refineries are located at Pointe-a-Pierre, Pointe Forten, Brighton, Guapo, Tabaquito and La Brea. The companies since oil development started about 1908 have drilled more than 2,000 wells. The following table gives the exports from Trinidad for 1933 and 1932:

	1933	1932
Crude oil	1,170,000	2,622,000
Gasoline	2,177,000	1,940,000
Kerosene	82,000	61,000
Fuel oil	5,526,000	5,005,000
Road oil	13,794,000	8,238,000

MANCHUKUO

All companies marketing in the state of Manchukuo are faced with a serious problem due to the action of the government in establishing a petroleum monopoly similar to that existing in some of the European countries. The main proposal of the government at this time is to stop the importation of petroleum products and require all distributors in that country to build refineries.

Japanese companies are to be given certain rights and it is possible that all distribution in the new state created by Japan will be through them. The Standard Vacuum Oil Co., formerly the Socony-Vacuum interests, the Texas Co., Royal Dutch-Shell and other companies have large investments in terminals and marketing facilities in Manchukuo.

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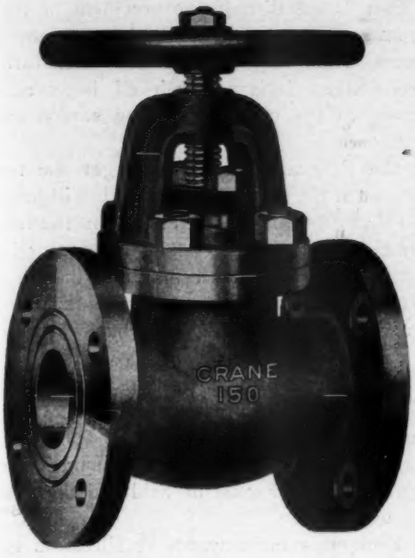

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The Situation Today

The Bureau of Mines report showing a decrease of 2,837,000 barrels in stocks of motor fuel at the end of June will, it is hoped, be matched in the July report.

The weekly figures on refinery operations compiled by the American Petroleum Institute from almost 90 per cent of the capacity of the country indicated a decrease at the end of June from the end of May of 3,088,000 barrels.

Using the Institute figures for July 28 there was a decrease of 2,808,000 barrels during that month compared to the end of June. From that basis it may be expected that the Bureau of Mines July report will show another healthy reduction of motor fuel stocks which are now, according to the Institute figures, around 48,500,000 barrels.

Production was below June of a year ago and also below May this year, both of those periods showing a larger demand, but as a matter of fact actual consumption was 6 or 7 per cent over what it normally would have been a year ago.

The explanation is that in June of 1933 there was an unusually heavy demand in anticipation of the one-half cent Federal tax on gasoline and in May this year there was much speculative buying in anticipation of advancing prices. The consumption for June this year was not subject to any deviations from normal.

Despite the drought's possible effect in the agricultural districts affected and the strike in California it is not thought likely the July consumption will show much change from June as July marked the opening of the touring season. The Institute's figures on refinery operations support this view.

Crude production, however, ran 139,000 barrels daily over the Federal quota, high though that was. With "hot" oil added this excess was very much more.

Reports from East Texas fail to show the reduction in "hot" oil production that was expected by some to follow the gasoline buying operations.

The report that there were ten cargoes of gasoline at Gulf ports awaiting disposal disturbed the market. The explanation that four or five of these were owned by buyers who did not have available immediate shipping facilities, was not completely reassuring and a further report that two cargoes were to be shipped to the Northern Pacific States, Oregon and Washington, intimated trouble for the California cartel.

Meanwhile the Federal authorities who were expected to curb "hot" oil operations in East Texas through enforcement of the tax law were reported to be still waiting for the official forms.

All these circumstances, taken together, tended to disturb the market and create apprehension. It is not believed, however, that the market for the balance of the main consuming season can be upset.

Some of these days the Federal officials must get the needed forms and begin enforcement of the revenue law, which will probably do more to curb "hot" oil than anything yet attempted in the field.

Revival of the movement for a new oil and gas commission in Texas at the special session of the legislature may also have a salutary effect. The special session struggling with revenue problems may be in a mood for a convincing showing of what wasteful exploitation of the State's natural resources means.

One fact stands out. Whether this plan or that fails to accomplish the results desired there is an increasing determination that the effort be continued until a solution is found.

It is recognized now that maintaining the market during the summer is not all, that the ground gained must be held and the position strengthened rather than weakened.

The industry having come this far towards stabilization is not going to turn back but must keep steadily forward. What has been accomplished in the face of all obstacles is the best incentive to go ahead with the program.

The Pipe Line's Position

The industry will be glad to learn that the transportation subcommittee of the Planning and Coordination Committee, in response to the request of the Petroleum Administrative Board, is preparing a report on the place of pipe lines in the industry.

When The Oil and Gas Journal in April, 1933, compiled and published "The Facts About Pipe Lines" it paved the way for this necessary action. It has been only within the past ten years that the other divisions of the industry have undertaken to present their case to the public. It was time a similar service was undertaken for the pipe line division.

No branch of the oil industry has been subjected to more sweeping attacks or destructive suggestions than the pipe lines. When all else failed the embittered critics of the oil industry they fell back on the pipe lines as the root of all evil.

Driven from one untenable position to another they have invariably rallied for a final assault along the pipe line. It is only natural then that at the tail end of the year's discussion of the code the pipe line should be dragged forth and made the chief villain.

It is perhaps as well, because it has provided an opportunity for a definite statement of the facts about the place of the pipe line in the industry that should dispose of these attacks for all time.

The facts are very simple; that the pipe line is strictly and purely a plant facility to supply a refiner with his raw material; that rail transportation would be more expensive, slower and less efficient; that, in fact, the present development of motor traffic would have been impossible without the pipe line as part of the oil industry.

The suggested divorcement of pipe lines from their plants raises immediately the question who else would take them? Railroads depend on a wide variety of freight. Pipe lines are dependent upon one product produced and bought by the oil industry alone.

Divorcing the pipe lines would be like going into an automobile plant and divorcing the conveyor system from the rest of the automotive industry or like deciding that ownership of the rails should be divorced from the railroads.

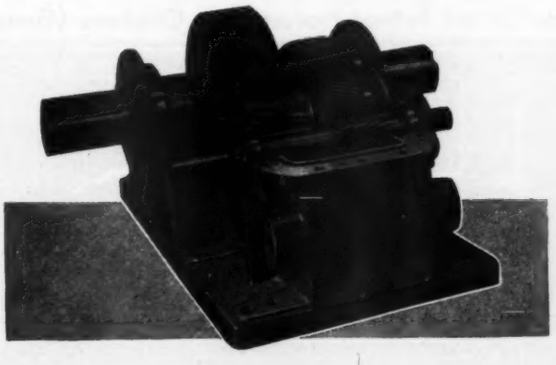
What folly it is to have a Petroleum Administration striving to stabilize the oil industry and at the same time considering schemes for disrupting that industry, by wrecking its whole system of operations.

Why WESTINGHOUSE HAS STANDARDIZED on Single Helical Gears for Oil Pumping Units

Cutting a single helical gear pinion by the hobbing process

◆

Below—*Single helical gears, heat-treated for greatly increased wear-life, are used in all Westinghouse Gear Units for oil pumping. Anti-friction bearings assure permanent alignment of gears and shafts, and cut friction losses to a minimum.*



ONE of the principal reasons why Westinghouse has standardized on helical gears is that *they are produced by the hobbing process now generally conceded to be the most accurate method of cutting gears.*

In this process both gear blank and cutter have a simple, continuous, uni-directional motion. There is no reciprocating action, or "backing off" for relief, at any time during the cutting process. Thus, variations and inaccuracies in tooth form, the causes of gear noise and vibration, are kept to a minimum. Also, gears of greater hardness can be cut by the hobbing process.

But greater accuracy is only one of the advantages of single helical gears:

They have uniform strength throughout the length of the tooth . . . hence deflection, loading, and wear are uniform.

Low helix angle results in less travel and therefore lower impact stresses for a given amount of back-lash. This factor is particularly important where the torque reverses twice every stroke as in oil pumping.

Floating pinions are not required. Anti-friction bearings are used, maintaining permanent alignment, and appreciably reducing friction losses, particularly in starting.

Adequate lubrication of gearing and bearing is assured at all times. Single helical gears operate equally well in either direction.

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Westinghouse

Gasoline Purchasing Program for August Imparts More Hopeful Feeling in Group 3 Territory

By T. F. SMILEY

A report that major refining companies, co-operating in the petroleum administration's plan for clearing East Texas of distress gasoline, would take 3,200 cars from that area in August cheered supporters of the gasoline purchasing program in the Oklahoma (Group 3) territory this week. It strengthened the hope that this program, which has not had easy going, might after all prove a remedy for demoralized conditions in the most troublesome spot on the oil map.

Imparting a further tonic effect was the report from Washington that the method to be followed in collecting the one-tenth of a cent tax on each barrel of crude and of refined oil would provide another weapon in the fight against hot oil, although the delay in putting the taxing machinery into operation was causing some misgiving. There was a growing willingness to believe that the petroleum administration, notwithstanding the equivocal position in which pending litigation has left the constitutionality of the oil code, intended to leave no stone unturned in its attack on violators.

All Goals Not Attained

That the cleanup campaign in East Texas had not yet attained all its goals seemed evident this week when jobbers and brokers continued to obtain low-octane U. S. Motor gasoline at 3¼ cents resale. Some of the material, seeking a quick outlet, was said to have been sold late last week at 3⅛ cents. This would predicate a price to the trade of not more than 3½ cents. But the administration-sponsored contracts under which the majors are buying from independent refiners in East Texas call for about 4 cents.

The prices named in these contracts are accepted as fixing the market. It is asserted by those active in the crusade to stabilize gasoline prices that the quantities of motor fuel sold at lower figures are not sufficient to be recognized as establishing a market.

The 3,200 cars of gasoline which it is planned to buy from East Texas refiners this month is expected to absorb about all that can be made under the Federal allocations. This looks to crude deliveries of approximately 61,000 bbls. daily, assuming that only one-third of a barrel of gasoline is produced from each barrel of crude; but according to reports 69,000 bbls. of crude was delivered daily to East Texas refiners throughout the last week of July. This would indicate that in the neighborhood of 8,000 bbls. of crude was being delivered to refiners who did not need it in keeping up with their allocations. That quantity of crude would make not less than 14 cars of motor fuel looking for spot sale daily.

Still Larger Deliveries Report

Other reports indicate that much more than 8,000 bbls. of crude is being delivered daily to East Texas refineries. These asserted deliveries in excess of allocation needs are said to afford an explanation of the presence of motor fuel offered in the spot market at a half-cent a gallon below the "official" prices.

Spot sales of 400-endpoint U. S. Motor material at 3⅜ cents were reported.

A cargo of 70,000 bbls. of East Texas motor fuel left Houston for the West Coast last Thursday, following a similar shipment made two weeks earlier. This material, it was said, would be retailed in Oregon and Washington.

Jobber buying was at low ebb, and it was declared by brokers that more 3¼-cent gasoline was available in East Texas than they could get rid of if they bought it.

It was said that shipping instructions on gasoline bought by majors were being given more promptly than was the case two weeks ago, relieving in a slight degree one of the causes of accumulation of stocks.

According to statements of persons in touch with the East Texas situation only about 8 per cent of the refiners in that area (considering refining capacity) were now outside the group who have agreed to dispose of their gasoline under the conditions imposed by the petroleum administration's purchasing plan.

Naturals Continue Firm

Natural gasoline continued to hold the firm market which developed a month ago. Little of the 26-70 grade was to be found on the spot market, virtually all of it being under contract. The stabilized grades were less active owing to the slow straightrun gasoline market.

Lubricants were weak. Bright stocks, following the course of prices in Pennsylvania, lost about 3½ cents throughout the list. Little business was being done outside of contracts. Group 3 manufacturers of bright stocks were severe losers through the mark-down of prices, as they were filling good-sized export orders. Steam-refined stocks underwent no price change this week, but it was regarded as

(Continued on Page 28)

Refined Oil Market Barometer

Gasoline market unsettled in all areas except Pennsylvania, its unsteady condition being attributed largely to uncertainty concerning the effectiveness of the petroleum administration's purchasing program. Consumption abnormally low in many areas owing to the drouth. Opinion expressed by some observers that a market tumble may be not far off. Lubricants slow, with prices of bright and steam-refined stocks off. Strong position of burning oils leads many to believe present prices may be carried through to cool weather, when current demand will take care of market.

Mid-Continent.—Gasoline unstable. Naturals firm. Lubricants and wax weak. Burning oils strong.

East Coast.—Bright and steam-refined stocks down. Gasoline unsteady. Wax weak.

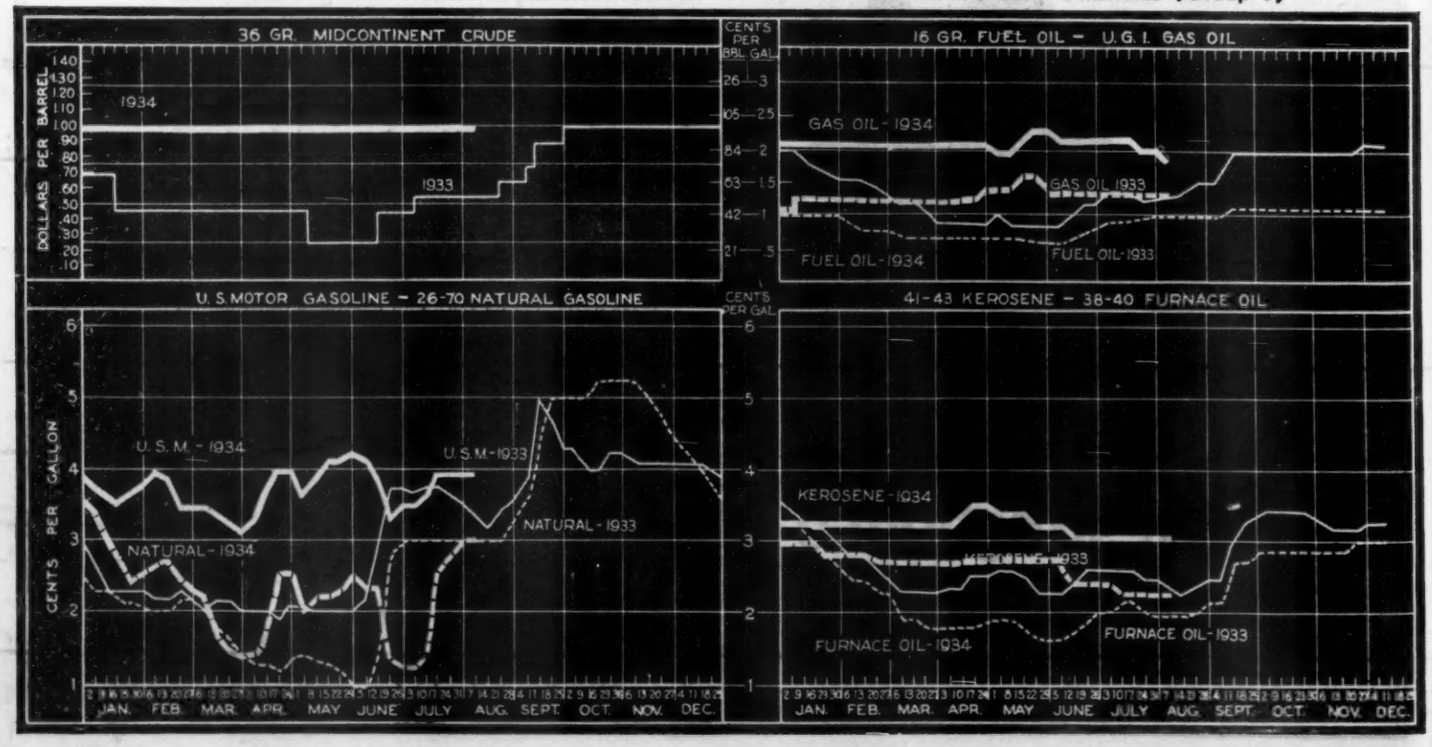
Gulf Coast.—Pale and red oils stronger. Gasoline lacks firmness. Little business in any oil products.

Pennsylvania.—Market exceedingly dull, with bright and steam-refined stocks off sharply. Gasoline alone steady.

California.—Retail markets weakening owing to production from innumerable small refineries. Prices unchanged, but their maintenance conjectural.

Chicago.—Gasoline irregular and backward. Kerosene steady. Heavy burning oils slow. Naphthas quiet.

Representative Mid-Continent Quotations on Crude Oil and Refined Products Basis Oklahoma (Group 3)



Opinion in East Divided on Price Outlook for Refined Oils as Spot Trading Shows Decline

By C. O. WILLSON
New York Bureau, The Oil and Gas Journal

NEW YORK, Aug. 6.—Generally slow trading so far as spot business was concerned coupled with further reductions in prices for steam refined stocks and bright stocks summarize the week's developments in eastern tank car markets. As a new week started there were several in the trade who were inclined to stress the bearish features of recent developments coupled with predictions that the market, particularly gasoline, was again nearing another crisis for which some remedy would have to be found or otherwise generally lower prices were in prospect.

Others with the same information acknowledged the slow trading but were confident that the situation was temporary and predicted a stronger market toward the end of the month with no danger of general price reductions in gasoline at this time. These observers point to the fact that under the government allocations for August, both crude oil production and crude runs to stills will be substantially less than in July. It is felt that these reductions in the case of refinery operations will force a few refiners to buy from other refiners to supplement their output which will not be sufficient to supply their current requirements during the main gasoline consuming month of the year. Those taking the optimistic view are looking for substantial withdrawals from storage to be shown in the weekly refinery reports of the American Petroleum Institute starting with data covering last week.

Have Reduced Runs

So far as the curtailment is concerned it is known in this territory where refinery operations are largely confined to the major companies, that those in charge have adjusted their operations to the lower runs, scheduled for August. This was done despite the fact in two or three cases at least the refiners actually needed more gasoline than they will produce to take care of their regular jobber customers and their own retail outlets and they do not have adequate storage on which to draw.

Other companies either in this territory or at plants located in adjoining sections have substantial gasoline in storage and are in position to draw on these inventories to offset their reduced current production. Just what the market effect of this situation will be cannot be determined until later in the month. The reduced operations were approved by the Government with the hope of aiding the weak spots in the market with a reduction in inventories by early September to levels which would not be burdensome at that time.

Gulf Coast Weak

The expressions of fear come from those who keep in close touch with the Gulf Coast markets. The gasoline market was weaker again at the Gulf last week after showing signs of strength the latter part of July. Refiners there have been endeavoring to maintain a quotation around 5 cents for middle octane U. S. Motor gasoline for shipment in cargo lots to Atlantic Seaboard points. Prices reported over the past week were much lower than this figure and it is apparent that this grade gasoline is available at 4½ cents or less. There were reports that this material would be absorbed early in August through the buying program directed by the Planning and Coordination Committee but up to this writing this had not occurred. It was said this gasoline would be absorbed by refiners in this section who had reduced their own output.

The continued weakness at the Gulf in gasoline export markets also was a factor. The usual quotation on 64-66 375 at the Gulf is 4½ cents but this price is nominal. Those familiar with this market state if the Gulf competed with Rumania in the spot business now available in Europe, the 375 endpoint price would have to be 4 cents and around 3½ cents on U. S. Motor gasoline. It is needless to state that these prices which are as low or lower than the quoted prices in the Mid-Continent could quickly become a disturbing factor in eastern markets where the major companies are posting from 6 to 6½ cents in tank car lots on U. S. Motor gasoline, the exact price depending on octane rating.

Lower Crude Prices

Another fundamental weakness which observers point to here pertains to the lower crude prices for export and coastwise movement. This market has been gradually weakening for several months. At the time a price of $1 was established at the wells for East Texas crude oil last year the cargo market at the coast advanced to the point where the going price was $1.25 to $1.28 per barrel. This price was considered in line with the posted quotation in the field to which was added the cost of pipe line transportation, loading and handling charges.

In recent months under considerable pressure from foreign buyers who claimed that the Gulf prices were out of line with basic crude prices outside the United States, these Gulf quotations have gradually softened. Over the past three weeks several cargoes are reported to have been placed for East Texas crude oil or its equivalent at prices ranging from $1.10 to $1.15 per barrel. It is contended that this crude oil going to refineries in Great Britain, France and Germany gives the foreign refiners an advantage in crude costs over refiners in the United States selling their finished products on world markets. It is further contended that buying distress gasoline, reducing crude runs to stills and similar activities offer no permanent solution to this situation which has as its background the question of whether or not present posted crude and refinery oil prices are too high in relation to the prevailing markets in the other countries which are either large producers or refiners or both. It is claimed that this development cannot be dismissed by stating that the low priced crude offered at the Gulf is "hot oil" which will disappear with an adequate enforcement program in East Texas. This hot oil may be a factor in the low prices at the coast but the bulk of the oil offered at this time is no doubt produced legally and is being sold by concerns who are willing to give the buyer a lower delivered price at the coast than is justified by posted prices in the field plus transportation and handling charges, in order to secure outlets.

Residual Oils

This situation has not stopped with crude oil and gasoline. The Gulf markets on residual fuel oils, gas oils and related products are also weaker. Earlier in the year these markets were tight as was the crude market. Gas oils suitable for cracking stock were scarce and in demand by refineries in France and other countries. Now the gas oil is quoted around 3 cents a gallon for cargo movement. Bunker C fuel oil for cargo movement to the Atlantic Seboard is offered as low as 85 cents last week, according to buyers. As in the case of gasoline these low prices on all grades of fuels are a threat to a healthy market along the Atlantic Seaboard if continued over any length of time.

Prices were steady in this market over the past week on gas oils, furnace oils and Bunker C fuel oil. At the fuel oil hearing last week in Washington authorized by the Oil Administrator, coal interests complained that fuel oil prices were too low and were ruining the coal business. At the same time, representatives of consumers said the prices were too high and had been advanced out of line with increased costs. Oil companies will present their side of the controversy through briefs. Predictions were again heard that lower top prices would shortly be made effective on contracts covering all grades of fuels with the possibility that subject to certain restrictions flat price contracts would be permitted with consumers. It is believed that changes of this character in contract agreements will satisfy the objections coming from users of furnace oils. An arrangement which will minimize the effect of present import taxes in the cases of fuels has also been suggested as a possible means of bringing about lower prices on the residual fuel oils.

Lubricating Oils

The week's declines in steam refined stocks and bright stocks were almost as great as those of the previous week. The prices quoted here on both Pennsylvania and Western oils were nearly as low as those quoted by operators in the Pennsylvania and Mid-Continent Fields. Representative quotations today on Pennsylvania material in barrels for export movement were: Six hundred S R. unfiltered, 17 to 17½ cents; 600 flash S.R., 20½ to 21 cents; 630 flash, 26 cents; No. 8 color bright stock, 26 to 26½ cents, and 6½ color bright stock, 25½ to 26 cents. A Western bright stock was quoted at 22 cents in barrels. Domestic prices in bulk were 5½ to 6½ cents under these prices in barrels.

Thus, within a few weeks steam refined stocks and bright stocks have lost

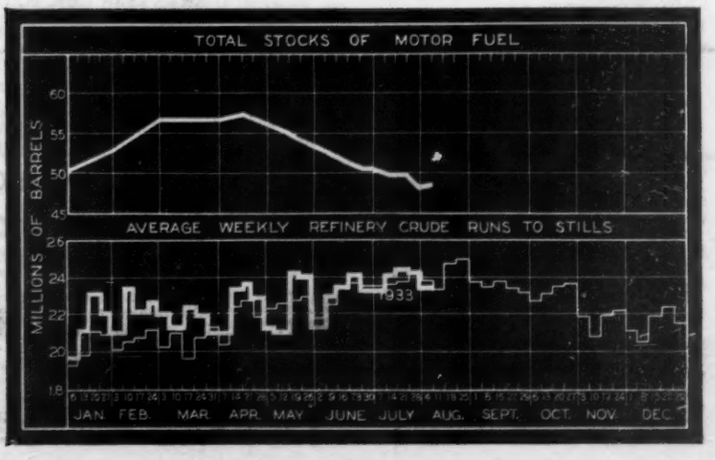
(Continued on Page 45)

American Petroleum Institute Weekly Refinery Statistics

Week Ending August 4, 1934

	Capacity reporting per cent	Daily crude runs (bbls.)	Finished motor fuel (bbls.)	Gas oil and fuel oil (bbls.)
East Coast	100.0	502,000	15,105,000	11,150,000
Appalachian	93.3	100,000	1,530,000	1,109,000
Indiana, Illinois, Kentucky	94.6	317,000	7,297,000	4,100,000
Oklahoma, Kansas, Missouri	83.7	233,000	4,953,000	3,667,000
Inland Texas	47.6	86,000	1,068,000	1,515,000
Texas Gulf	97.5	457,000	3,520,000	8,802,000
Louisiana Gulf	96.4	127,000	1,473,000	2,105,000
North Louisiana and Arkansas	83.7	56,000	236,000	486,000
Rocky Mountain	66.7	36,000	750,000	634,000
California	96.9	427,000	12,378,000	78,149,000
Total United States	89.7	2,341,000	48,310,000	111,717,000

Note: Finished motor stocks shown in graph and in table include those at refineries, at bulk terminals and in pipe lines, but do not include 5,000,000 to 7,000,000 bbls. of unfinished gasoline which could be reprocessed quickly.



REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement except as otherwise noted

Quotations are exclusive of the Federal tax of 1 cent a gallon on gasoline and 4 cents on lubricating oils.

Refinery Gasolines

	Aug. 7		July 31	
OKLAHOMA (Group 3)—				
U. S. Motor grades:				
Below 60 octane	.03⅞	.04½	.03⅞	.04⅛
60-64.9 octane	.04½	.04⅝	.04½	.05⅝
65-70 octane	.04⅞	.05	.04⅞	.05
60-62 400 grades:				
Below 60 octane	.03⅞	.04⅛	.03⅞	.04⅛
60-64.9 octane	.04½	.04⅝	.04½	.04⅝
65-70 octane	.05	.05¼	.05	.05¼
64-66 375	.04¼	.04⅜	.04¼	.04⅜
68-70 360	.04⅜	.04½	.04⅜	.04½
NORTH TEXAS—				
U. S. Motor grades:				
Below 60 octane	.03¾	.03⅞	.03¾	.03⅞
60-64.9 octane	.04⅜	.04½	.04⅜	.04½
65-70 octane	.04⅝	.04⅞	.04⅝	.04⅞
60-62 400	.03⅞	.04	.03⅞	.04
64-66 375	.04		.04	
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
U. S. Motor grades:				
Below 60 octane	.04¼		.04¼	
60-64.9 octane	.05		.05	
65-70 octane	.05¼		.05¼	
60-62 400	.04¼	.04⅜	.04¼	.04⅜
68-70 360	.04⅜	.04⅝	.04⅜	.04⅝
ARKANSAS (Ark., N. La. & Miss. del.)—				
U. S. Motor grades:				
Below 60 octane	.04¼		.04¼	
60-64.9 octane	.05		.05	
65-70 octane	.05¼		.05¼	
CHICAGO (Based on Oklahoma Group 3)—				
U. S. Motor grades:				
Below 60 octane	.03¾	.04	.03¾	.04
60-64.9 octane	.04½	.04¾	.04½	.04¾
65-70 octane	.04¾	.05	.04¾	.05
60-62 400	.03⅞	.04	.03⅞	.04
64-66 375	.04⅛	.04¼	.04⅛	.04¼
68-70 360	.04¼	.04½	.04⅜	.04½
Aviation fighting grade	.05¼	.05¼	.05⅛	.05¼
PENNSYLVANIA (inland refineries)—				
58-60 U. S. Motor:				
Below 60 octane	.05⅝	.05¾	.05⅝	.05¾
60-64.9 octane	.06⅛	.06⅝	.06⅛	.06⅝
65-70 octane	.06¾	.06⅞	.06¾	.06⅞
68-70 350	.06¼		.06¼	
CALIFORNIA (domestic movement)—				
54-58 U. S. Motor	.07	.08	.07	.08
58-60 400	.07¾	.08¾	.07¾	.08¾
EAST COAST—				
U. S. Motor, below 60 octane:				
*New York	.06	.06½	.06	.06½
Baltimore	.06	.06¼	.06	.06¼
U. S. Motor, 60-64 octane:				
*New York (Bayonne)	.06¼	.06½	.06¼	.06½
Philadelphia	.06¼	.06½	.06¼	.03½
Boston	.06¼	.0670	.06¼	.0670
Baltimore	.06¼	.06½	.06¼	.06½
Charleston, S. C.	.06¼	.06½	.06¼	.06½
U. S. Motor, 65 and above:				
*New York (Bayonne)	.06½	.06¾	.06½	.06¾
Philadelphia	.06½	.06¾	.06½	.06¾
Boston	.0650	.0690	.0650	.0690
Baltimore	.06½	.06¾	.06½	.06¾
Charleston, S. C.	.06½	.06¾	.06½	.06¾

*All grades of gasoline one-fourth cent less for small barge shipments.

GULF COAST (domestic)—				
U. S. Motor:				
Below 60 octane	.04⅞	.05⅛	.04⅞	.05⅛
60-64.9 octane	.05⅛	.05⅜	.05⅛	.05⅜
65 octane and higher	.05⅜	.05⅝	.05⅜	.05⅝

Naphthas

	Aug. 7		July 31	
PENNSYLVANIA (inland refineries)—				
60-64 430-450 (blending)	.05⅜	.05½	.05⅜	.05½
CHICAGO (Based on Oklahoma Group 3)—				
50-52 450 (blending)	.03¾	.04	.03¾	.04
Cleaners' naphtha, 56-58 gr., 200 i.b.p 320 e.p.	.06¾	.07	.06¾	.07
Lacquer diluent, 180 i.b.p., 250 e.p.	.07¾	.08	.07¾	.08
Lacquer diluent, 180 i.b.p., 200 e.p.	.08¾	.09	.08¾	.09
Rubber solvent, 68-70 gr., 100 i.b.p.-330 e.p.	.06¾	.07	.06¾	.07
Stoddard solvent, 300 i.b.p.-410 e.p., over 83° flash	.06¼	.06½	.06¼	.06½
Pet. thinner, 290-300 i.b.p.-415 e.p., over 83° flash	.06¼	.06½	.06¼	.06½
V.M.&P. naphtha, 56-58 gr., 190-200 i.b.p.-330 e.p.	.06¾	.07	.06¾	.07
Petroleum spirits	.05¾	.06	.05¾	.06

Natural Gasolines

	Aug. 7		July 31	
OKLAHOMA (Group 3)—				
Grade 26-70	.03		.03	
Grade 18-55	.03½		.03½	.03⅝
Low vapor pressure grades:				
15 lb. v.p. (max.)	.03¾		.03¾	
11 lb. v.p. (max.)	.03¾	.04	.03¾	.04
NORTH TEXAS—				
Grade 26-70	.03		.03	
Grade 18-55	.03½		.03½	.03⅝
Low vapor pressure grades:				
15 lb. v.p. (max.)	.03¾		.03¾	
11 lb. v.p. (max.)	.03¾	.04	.03¾	.04
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
Grade 26-70	.03⅜		.03⅜	
CALIFORNIA—				
75-85 375	.06	.06¾	.06	.06¾

Kerosenes

(All kerosenes water white)

	Aug. 7		July 31	
OKLAHOMA (Group 3)—				
41-43	.03⅛	.03¼	.03⅛	.03⅜
42-44	.03¼	.03½	.03⅜	.03⅝
NORTH TEXAS—				
40-41	.02⅞	.03⅛	.02⅞	.03⅛
41-43	.03	.03¼	.03	.03¼
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
41-43	.03⅜		.03⅜	
ARKANSAS (Ark., N. La. & Miss. del.)—				
41-43	.03¾	.03½	.03⅜	.03½
PENNSYLVANIA (inland refineries)—				
45	.04⅜	.04½	.04⅜	.04½
46	.04½	.04¾	.04½	.04¾
47	.04⅝	.04⅞	.04⅝	.04⅞
CHICAGO (Based on Oklahoma Group 3)—				
41-43	.03⅛	.03¼	.03⅛	.03¼
42-44	.03⅜	.03½	.03⅜	.03½
CALIFORNIA (Pacific Coast consumption)—				
38-40 high burning test	.04¾	.05¼	.04¾	.05¼
NEW YORK (Bayonne, N. J.)—				
41-43	.05¼	.05½	.05¼	.05½
GULF COAST (domestic)—				
41-43	.04½	.04⅝	.04½	.04⅝

Petroleum Coke

(Prices per ton f.o.b. refineries in Chicago area)
(Refineries will absorb freight to 80 cents a ton)

	Aug. 7		July 31	
Breeze (screenings)	5.00		5.00	
Pile run	5.00		5.00	
Lump and egg	7.00	8.00	7.00	8.00
Direct from still	6.00		6.00	

Furnace Oils and Tractor Fuels

(Zero cold test under 190° flash and good odor)

	Aug. 7		July 31	
OKLAHOMA (Group 3)—				
32-36 straw	.02½	.02⅝	.02½	.02⅝
36-38 straw	.02½	.02⅝	.02½	.02⅝
38-40 straw	.02⅜	.02½	.02⅜	.02½
38-40 prime white	.02⅞	.02¾	.02⅞	.02¾
NORTH TEXAS—				
38-40 straw	.02⅝	.02¾	.02⅝	.02¾
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
36-40 furnace oil	.02⅞	.03	.02⅞	.03
ARKANSAS (Ark., N. La. & Miss. del.)—				
32-36 furnace oil	.02⅝	.02¾	.02⅝	.02¾
CHICAGO (Based on Oklahoma Group 3)—				
32-36 straw	.02⅜	.02½	.02⅜	.02½
38-40 straw	.02⅜	.02½	.02⅜	.02½
38-40 prime white	.02½	.02⅝	.02½	.02⅝
NEW YORK (Bayonne, N. J.)—				
36-40 (No. 1 grade)	.05¼	.05½	.05¼	.05½
32-36 (No. 2 grade)	.04¾	.05	.04¾	.05
21 industrial (No. 4 grade)	.04½	.05	.04½	.05

Gas Oil, Diesel Oil and Fuel Oil

(Gas oil per gallon; Diesel and fuel oils per barrel)

	Aug. 7		July 31	
OKLAHOMA (Group 3)—				
32-36 gas oil cracking stocks	.02	.02⅛	.02⅛	.02¼
U.G.I. gas oil	.01⅞	.02	.02	.02¼
32-36, zero to 15 gas oil	.02⅜	.02½	.02⅜	.02½
28-30, No. 3 burner oil	.95	1.00	.95	1.00
28-30, zero to 10 fuel oil	.90	.95	.90	.95
26-30, zero to 10 fuel oil	.85	.95	.85	.95
24-26 fuel oil	.75	.80	.75	.80
20-22 fuel oil	.67½	.70	.67½	.70
Below 16 fuel oil	.62½	.65	.62½	.65
NORTH TEXAS—				
32-36 gas oil, industrial	.01⅞	.02	.01⅞	.02
22-26 fuel oil	.67½	.70	.67½	.70
Below 20 fuel oil	.57½	.62½	.57½	.62½
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
30-32 gas oil, zero	.02½	.02⅝	.02½	.02⅝
14-16 fuel oil	.70	.75	.70	.75
ARKANSAS (Ark., N. La. & Miss. del.)—				
30-32 gas oil, zero	.02½	.02⅝	.02½	.02⅝
32-36 gas oil	.02⅜	.02½	.02⅜	.02½
14-16 fuel oil	.70	.75	.70	.75
CHICAGO (Based on Oklahoma Group 3)—				
32-36 gas oil, industrial	.02	.02¼	.02	.02¼
28-30 zero to 10, fuel oil	.97½	1.00	.97½	1.00
26-28 zero to 10, fuel oil	.87½	.90	.87½	.90
22-26 zero to 10, fuel oil	.77½	.80	.77½	.80
18-22 zero to 10, fuel oil	.62½	.67½	.62½	.65
Below 18 fuel	.57½	.60	.55	.57½

Note: Fuel oils of more than 40 cold test generally 5 to 15 cents per barrel less in all these areas.

PENNSYLVANIA (inland refineries)—				
36-40	.03¾	.03⅞	.03⅞	
CALIFORNIA—				
Los Angeles:				
30-34 gas oil per bbl.	1.10	1.26	1.10	1.26
27 plus Diesel	1.05	1.20	1.05	1.20
27 plus Diesel (bunkers)	1.13	1.20	1.13	1.20
12-16 (bunker at tidewater)	.82	.85	.82	.85
10-16 (cargo lots)	.66	.75	.66	.75
12-17 (tank cars)	.60	.80	.60	.80
San Joaquin Valley:				
10-18 (tank cars)	.55		.55	
San Francisco:				
27 plus Diesel per bbl.	1.15		1.15	
27 plus Diesel (bunkers)	1.19		1.19	
GULF COAST—				
28-30 gas oil	.03½	.03¾	.03½	.03¾
28-30 Diesel (bunkers)	1.80		1.80	
Bunker C (bulk cargoes)	.95	1.00	.95	1.00
Bunker C (bunkers)	1.05	1.10	1.05	1.10
NEW YORK (Bayonne, N. J.)—				
27 plus, gas oil	.04½	.05	.04½	.05
28-30 Diesel (lighterage 6½ cents per bbl.)	1.95		1.95	
*Bunker C (to ocean-going ships in N. Y. harbor)	1.30		1.30	

*Lighterage charge 5 cents per barrel additional.

Neutral Oils

(Vis. at 100° F. except Pennsylvania, and color N.P.A.)

	Aug. 7		July 31	
OKLAHOMA (Group 3)—				
Zero to 10 Cold Test:				
150-3	.10		.10	
180-3	.11¼		.11¼	
180-4	.10¾		.10¾	
200-3	.11¾		.11¾	
200-4	.11¼		.11¼	
240-3	.13¾		.13¾	
240-4	.13¼		.13¼	
280-3	.14¾		.14¾	
280-4	.14		.14	
300-3½	.15¼		.15¼	
400-4	.17¼		.17¼	
100-2 paraffin oil	.05¾		.05¾	
15-30 Cold Test:				
200-3	.10¾		.10¾	
200-4	.10¼		.10¼	
240-3	.12¾		.12¾	
240-4	.12¼		.12¼	
280-3	.13¾		.13¾	
280-4	.13		.13	
GULF COAST—				
Pale Oils:				
200-3	.07½		.07½	
300-3	.08	.08¼	.08	.08¼
500-3½	.09	.09¼	.09	.09¼
750-3½	.09½	.09¾	.09½	.09¾
1,200-3½	.10	.10¼	.10	.10¼
2,000-4	.10¼	.10½	.10¼	.10½
Red Oils:				
200-5-6	.06½		.06½	
300-5-6	.07	.07½	.07	.07½
500-5-6	.08	.08¼	.08	.08¼
750	.08½	.08¾	.08½	.08¾
1,200-5-6	.09	.09¼	.09	.09¼
CALIFORNIA—				
Pale Oils:				
100-2½-3	.23	.25	.23	.25
200-2½-3	.23	.25	.23	.25
300-3-3½	.23	.25	.23	.25
350-3-4	.23	.25	.23	.25
400-3-4	.23	.25	.23	.25
450-3-4	.23	.25	.23	.25
550-3-4	.23	.25	.23	.25
600-3-4	.23	.25	.23	.25
Red Oils:				
200-4-5	.23	.25	.23	.25
300-5-6	.23	.25	.23	.25
350-5-6	.23	.25	.23	.25
400-5-6	.23	.25	.23	.25

450-5-6	.23	.25	.23	.25
500-5-6	.23	.25	.23	.25
600-5-6½	.23	.25	.23	.25
700-6½ plus	.23	.25	.23	.25
750-6½ plus	.23	.25	.23	.25
900-6½ plus	.23	.25	.23	.25
PENNSYLVANIA—				
150 vis. at 70° F., 3 color; 400-405 flash:				
Zero pour test	.23	.23½	.23	.23½
10 pour test	.22	.22½	.22	.22½
15 pour test	.21½	.22	.21½	.22
25 pour test	.21	.21½	.21	.21½
180 vis at 70° F., 3 color:				
25 pour test	.24½	.25	.24½	.25
200 vis. at 70° F., 3 color:				
Zero pour test	.29½	.30½	.28½	.30½
10 pour test	.28½	.29	.28½	.29
15 pour test	.28	.28½	.28	.28½
25 pour test	.27½	.28	.27½	.28

Bright and Steam Refined Stocks

OKLAHOMA (Group 3)—	Aug. 7		July 31	
Bright Stocks:				
190-200 D	.18½		.21¾	
150-160 D, 0-10	.15½		.19	
150-160 D, 10-25	.15		.18½	
150-160 25-40	.14½		.18	
150-160 E	.14½		.18	
Steam refined:				
630 light green (treated)	.13		.13	
600 light green (untreated)	.06	.08	.06	.08
600 dark green (untreated)	.04½	.07	.04½	.07
PENNSYLVANIA—				
Bright Stocks (Pennsylvania grade, No. 8 color, 145-50 at 210; 540-550 flash):				
10 pour test	.20	.20½	.23½	.24
15 pour test	.19½	.20	.23	.23½
20 pour test	.19	.19½	.22½	.23
25 pour test	.18½	.19	.21	.21½
Steam refined:				
600	.10½	.11	.12	
650	.13	.14	.15	
660 Pennsylvania flash	.14	.15	.16	
630 Pennsylvania flash	.18½	.19½	.21½	
600 Warren E filtered	.14	.15	.16	.17

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—	Aug. 7		July 31	
124-126 white crude scale	.03¼	.03⅜	.03¼	.03⅜
PENNSYLVANIA—				
122-124	.0290	.0295	.03	.0305
124-126	.0295	.03	.0315	.0320
NEW YORK HARBOR—				
Wax (a.m.p.) in bags fully refined:				
120-122	.0420	.0430	.0420	.0430
123-125	.0440	.0460	.0440	.0460
125-127	.0445	.0470	.0445	.0470
128-130	.0480	.0495	.0480	.0495
130-132	.05	.0510	.05	.0510
133-135	.0545	.0570	.0545	.0570
135-137	.0570	.0595	.0570	.0595
124-126 crude scale	.032	.0325	.032	.0325
Petrolatum in barrels in carload lots:				
Dark green	.01⅞		.01⅞	
Amber	.02⅞	.03	.02⅞	.03
Extra amber	.03½	.03¼	.03¼	.03¼
Lily white	.06¾	.06⅞	.06¾	.06⅞
Snow white	.07¾	.07⅞	.07¾	.07⅞
Cream	.05⅝	.05¾	.05⅝	.05¾
CHICAGO (f.o.b. switching district)*—				
122-124 wax	.0490	.0500	.0490	.0500
125-127 wax	.0515	.0525	.0515	.0525
127-129 wax	.0530	.0540	.0530	.0540
130-132 wax	.0590	.0600	.0590	.0600
132-134 wax	.0615	.0625	.0615	.0625

*Cents per pound on carlot orders in burlap bags of 225 lbs. approx. Add 3° F. a.m.p.

Export Prices

GASOLINE

GULF COAST—	Aug. 7		July 31	
U. S. Motor	.04⅛	.04¼	.04⅛	.04¼
60-62 400	.04¼		.04¼	
61-63 390	.04⅜	.04½	.04⅜	.04½
64-66 375	.04½	.04⅝	.04½	.04⅝
LOS ANGELES, CALIF.—				
U. S. Motor grades:				
53-55 octane	.04	.04¼	.04	.04¼
55-65 octane	.04¼	.04½	.04¼	.04½
65-67 octane	.04½	.04¾	.04½	.04¾
67-69 octane	.04¾	.05	.04¾	.05
Above 69 octane	.05	.05¼	.05	.05¼
58-60 400 endpoint	.04¾	.05½	.04¾	.05½

KEROSENE

GULF COAST—				
41-43 prime white	.04	.04⅛	.04	.04⅛
41-43 water white	.04⅛	.04¼	.04⅛	.04¼
41 water white	.04¼	.04⅜	.04¼	.04⅜
LOS ANGELES, CALIF.—				
41-43 water white	.04¼	.04¾	.04¼	.04¾

LUBRICANTS

NEW YORK (f.a.s. in bbls.)—				
Cylinder Stocks:				
600 Warren E	.23	.23½	.23	.23½
600 S.R. unfiltered	.19	.19½	.19	.19½
650 S.R. unfiltered	.22	.22½	.22	.22½
600 flash S.R.	.23½		.23½	
630 flash S.R.	.28	.28½	.28	.28½
Bright Stocks:				
8 color	.28	.28½	.28	.28½
6½ plus color, in dilution	.27	.27½	.27	.27½

NEUTRAL OILS

200-3 color	.33½	.34	.33½	.34
150-3 color	.28	.28½	.28	.28½

PARAFFIN WAX (Fully Refined)

NEW YORK (prices per pound)—				
120-122 a.m.p.	.0405	.0425	.0405	.0425
123-125 a.m.p.	.0435	.0455	.0435	.0455
125-127 a.m.p.	.0440	.0465	.0440	.0465
128-130 a.m.p.	.04¾	.0490	.04¾	.0490
130-132 a.m.p.	.0495	.0505	.0495	.0505
133-135 a.m.p.	.0540	.0565	.0540	.0565
135-137 a.m.p.	.0565	.0590	.0565	.0590

Crude Oil Gravity Table

Degrees gravity—	1 Oklahoma and Kansas	2 North Texas, Central Texas and East Central Texas	3 North Louisiana and Arkansas	4 Gray County, Texas	5 Carson, Hutchinson, and Moore Counties, Texas	6 Conroe, Texas	7 Salt Creek, Wyo	8 Gulf Coast, Texas and Louisiana	9 Gulf Coast, Texas and Louisiana	10 Cotton Valley, Louisiana
Below 20	....	....	....	....	....	....	....	$.82	$.82	..
20-20.9	....	....	....	....	....	....	....	.84	.84	....
21-21.9	....	....	....	....	....	....	....	.86	.86	....
22-22.9	....	....	....	....	....	....	....	.88	.88	....
23-23.9	....	....	....	....	....	....	....	.90	.90	....
24-24.9	....	....	....	....	....	....	....	.92	.92	....
Below 25	*$.76	....	....	....	....	....	....	....	....	$.70
25-25.9	*.78	....	....	....	....	....	....	.94	.94	.72
26-26.9	*.80	....	....	....	....	....	....	.96	.96	.74
27-27.9	*.82	....	....	....	....	....	....	.98	.98	.76
28-28.9	*.84	....	....	....	....	....	....	1.00	1.00	.78
Below 29	.84	$.79	$.79	....	....	....	$.84	....	....	....
29-29.9	.86	.81	.81	....	....	....	.86	1.02	1.02	.80
30-30.9	.88	.83	.83	....	....	....	.88	1.04	1.04	.82
31-31.9	.90	.85	.85	....	....	....	.90	1.06	1.06	.84
32-32.9	.92	.87	.87	....	....	....	.92	1.08	1.08	.86
33-33.9	.94	.89	.89	....	....	....	.94	1.10	1.07	.88
34-34.9	.96	.91	.91	....	....	....	.96	1.12	1.08	.90
Below 35	....	....	....	$.79	$.69	....	....	....	....	..
35-35.9	.98	.93	.93	.81	.71	$1.09	.98	1.12	1.09	.92
36-36.9	1.00	.95	.95	.83	.73	1.11	1.00	1.12	1.10	.94
37-37.9	1.02	.97	.97	.85	.75	1.13	1.02	1.12	1.11	.96
38-38.9	1.04	.99	.99	.87	.77	1.15	1.04	1.12	1.12	.98
39-39.9	1.06	1.01	1.01	.89	.79	1.17	1.06	1.12	1.13	1.00
40 and over	1.08	1.03	1.03	.91	.81	1.19	1.08	1.12	1.14	1.02

Note.—Effective June 1, 1934, Texas Co. purchases Texas Panhandle crude on a sweet crude and sour crude basis. Panhandle sweet crude is paid for on a basis of the Gray County prices posted above, and Panhandle sour crude is paid for on a basis of Carson and Hutchinson County prices posted above.

*The following companies purchasing crude oil in Kansas or Oklahoma, or both, begin their price schedule: Below 25°, 76 cents; 25-25.9°, 78 cents, with 2 cents added for each degree upward to 40 and over at $1.08; Carter Oil Co., Magnolia Petroleum Co., Pure Oil Co., Rock Island Refining Co., Shell Petroleum Corp., Sinclair Prairie Oil Marketing Co., Skelly Oil Co., and Wilcox Oil & Gas Co. All others begin their schedules at below 29°, 84 cents, excepting Phillex Oil Co., which begins with below 31° at 86 cents.

Column 1.—Effective September 29, Texas Co. in Oklahoma; Stanolind Crude Oil Purchasing Co. in Kansas and Oklahoma; Andersen & Prichard, Inc., in Oklahoma; Bell Oil & Gas Co. in Oklahoma; Carter Oil Co. in Oklahoma and Kansas; Deep Rock Oil Co. in Oklahoma; Derby Oil Co. in Kansas; Globe Refining Co. in Oklahoma; Golden Rule Refining Co. in Kansas; Gypsy Oil Co. in Oklahoma and Kansas; Kanotex Refining Co. in Kansas; Magnolia Petroleum Co. in Oklahoma; Mid-Continent Petroleum Corp. in Oklahoma; National Refining Co. in Kansas and Oklahoma; Shell Petroleum Corp. in Kansas and Oklahoma; Sinclair Prairie Oil Marketing Co. in Kansas and Oklahoma; Texas Co. in Oklahoma; Tide Water Oil Co. in Oklahoma; Vickers Refining Co. in Kansas; Continental Oil Co. in Kansas and Oklahoma; Empire Pipe Line Co. in Oklahoma and Kansas; Phillex Oil Co. in Kansas and Oklahoma; Pure Oil Co. in Oklahoma; Skelly Oil Co. in Kansas. Effective September 29, by White Eagle Oil Corp. in Kansas; Oct. 1 by Barnsdall Refineries, Inc., in Oklahoma.

Column 2.—Effective September 29, by Texas Co., Stanolind Crude Oil Purchasing Co., Humble Oil & Refining Co., Sinclair Prairie Oil Marketing Co., Gulf Pipe Line Co., Magnolia Petroleum Co., Bell Oil & Gas Co., Continental Oil Co. Effective September 29, in the Van Pool, Van Zandt County, Pure Oil Co. posted below 29°, 84 cents, with 2 cents added for each degree up to 40 and over at $1.08.

Column 3.—Effective September 29, by Texas Co., Magnolia Petroleum Co., Gulf Refining Co. Effective December 22, Stanolind Oil & Gas Co. in Pine Island, Louisiana, and Marion County, Texas, posted below 29°, 79 cents, with 2 cents added for each degree up to 40 and over at $1.03. Effective March 17, 1934, by Standard Oil Co. of Louisiana and Louisiana Oil Refining Co. Starting with below 25°, 71 cents, adding 2 cents for each degree upward to 40 and over at $1.03.

Column 4.—Effective September 29, by Texas Co., Humble Oil & Refining Co., Magnolia Petroleum Co., Sinclair Prairie Oil Marketing Co., and H. F. Wilcox Oil & Gas Co. On same day Phillex Oil Co. posted below 31°, 71 cents, with 2 cents added for each degree up to 40 and over at 91 cents. Effective June 1, 1934, Texas Co. (see note above).

Column 5.—Effective September 29, by Texas Co., Humble Oil & Refining Co., Gulf Pipe Line Co., Magnolia Petroleum Co., Wilcox Oil & Gas Co., Continental Oil Co. On same day, Phillex Oil Co posted below 31°, 61 cents, with 2 cents added for each degree upward to 40 and over at 81 cents. Effective June 1, 1934, Texas Co. (see note above).

Colum 6.—Effective September 29, by Humble Oil & Refining Co. and Tide Water Oil Co., and on September 30, by Texas Co. which on September 29 had posted a schedule of $1.07 to $1.12 with a 1-cent spread on each degree.

Column 7.—Effective September 29, by Stanolind Oil & Gas Co.

Column 8.—Effective September 29, by Humble Oil & Refining Co., Gulf Pipe Line Co., Shell Petroleum Corp., Pure Oil Co., Sinclair Prairie Oil Marketing Co. On October 2, Magnolia Petroleum Co. posted Lockport, Louisiana: 26-26.9°, 84 cents with 2 cents added for each degree upward to 34 and over at $1.12, and in Cameron Meadows and Iowa, Louisiana: Below 26°, 72 cents with 2 cents added for each degree up to 34 and over at $1.02. These prices were 2 cents higher on each degree than Magnolia prices posted on September 29. Effective September 29, Shell Petroleum Corp. posted in Iowa, Louisiana, district: Below 26° 70 cents, with 2 cents added for each degree upward to 34° and over at $1; and in Black Bayou and White Castle, Louisiana: Below 26°, 80 cents, with 2 cents added for each degree upward to 34° and over at $1.10.

Column 9.—Effective September 30, Texas Co. (On September 29, Texas Co. had posted a schedule of 2 cents on each degree, but changed it on September 30.)

Column 10.—Effective September 29, by Louisiana Oil Refining Co.

(California Crude Oil Prices on Page 39)

Crude Oil Prices

Oklahoma, Kansas, North Central and East Central Texas

East Texas	$1.09
Stratman, Kans. (Sept. 29, 1933)	1.03
Corsicans (heavy) (June 17, 1933)*	.80
Other fields	(See gravity table)

Note—In East Texas, effective September 29, 1933, by Texas Co., Stanolind Crude Oil Purchasing Co., Humble Oil & Refining Co., Shell Petroleum Corp., Gulf Pipe Line Co., Tide Water Oil Co., Sinclair Prairie Oil Marketing Co., Magnolia Petroleum Co., Sun Oil Co., Panola Pipe Line Co., and Empire Oil & Refining Co.

*Magnolia Petroleum Co.

West Texas

Crane, Upton, Crockett, Howard (Glasscock, Mitchell (Sept. 29, 1933)	$.70
Ector, Winkler and Pecos Counties and Lea County, New Mexico (Sept. 29, 1933)	.72
Pecos County, Yates shallow pool (Sept. 29, 1933)*	.68
Jones and Fisher Counties	See gravity table

Note—Effective September 29, 1933, by Humble Oil & Refining Co., Texas Co., Gulf Pipe Line Co., Shell Petroleum Corp., Magnolia Petroleum Co., and by Stanolind Oil & Gas Co. in Winkler County, Texas.

*Shell Petroleum Corp.

Gulf Coast

Grade A and Grade B specifications discontinued by leading buyers (See gravity table)

Tomball (see note)*	$1.18
Livingston (Sept. 29, 1933)†	1.00
Cleveland (Jan. 11, 1934)	1.00
Greta (Sept. 29, 1933)	.88
Refugio, light	(See gravity table)
Refugio, heavy (Sept. 29, 1933)‡	.85
Markham and High Island	(See Gulf Coast gravity table)
Conroe	(See Conroe gravity table)

Note—Tomball, effective September 29, by Humble Oil & Refining Co., and October 2 by Magnolia Petroleum Co., and November 10, by Stanolind Oil & Gas Co.

*Greta posted by Texas Co. †Shell Petroleum Corp. ‡Refugio heavy, by Humble Oil & Refining Co. Cleveland (Liberty County) posted by Magnolia Petroleum Co.

South Central and Southwest Texas

(See note below table)

Darst Creek	$.87
Mirando	.80
Luling (Sept. 29, 1933)	.75
Pettus	1.05
Salt Flat	.87
Lytton Springs (Sept. 29, 1933)	.95
Duval County (Sept. 29, 1933)	.80
Saxet	.85

Note—Effective on September 29 by Humble Oil & Refining Co., in Darst Creek, Mirando, Pettus, Salt Flat and Saxet. Effective September 29 in Darst Creek by Gulf Pipe Line Co. and Texas Co. Effective October 2 by Magnolia Petroleum Co. Effective in Pettus and Salt Flat on September 29 by Humble Oil & Refining Co. and Gulf Pipe Line Co. Luling and Lytton Springs by Magnolia Petroleum Co. Duval County by Texas Co. Saxet, effective September 29, by Humble Oil & Refining Co. and Texas Co.

(Continued on Page 39)

TANK WAGON MARKETS

Quotations for gasoline and kerosene in United States, as furnished by the larger marketing concerns, include taxes

August 7, 1934

Taxes

The gasoline quotations given in the following tables include the 1 cent Federal tax, as well as state, county and city taxes. The gasoline quoted is the regular or standard grade. In most marketing areas a third grade and a premium grade are also available.

Discounts

Under the standard form of commercial consumer contract which went into effect March 1, 1934, save in California, Oregon, Washington, Arizona and Nevada, a discount of 1 cent a gallon off tank wagon, or 3 cents a gallon off retail prices, is permitted for purchases running between 5,000 and 10,000 gallons a month, and 2 cents a gallon off tank wagon, or 4 cents a gallon off retail prices, for purchases in lots of more than 10,000 gallons a month. The minimum delivery is 35 gallons.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Denver, Colo.	18 0	20.0	6.0	10.0
Pueblo	18 0	20.0	6.0	13 0
Grand Junction	19.0	21.0	6.0	15 0
Casper, Wyo.	18 0	20.0	5.0	11.5
Cheyenne	18 0	20.0	5.0	13 0
Butte, Mont.	21.0	23.0	5.0	17 5
Billings	22.5	24.5	6.0	16.5
Helena	21.0	23.0	6.0	17.5
Great Falls	21.5	23.5	6.0	17.5
Salt Lake, Utah	17.0	19.0	5.0	16.0
Boise, Idaho	22.5	24.5	6.0	18.0
Twin Falls	22.5	24.5	6.0	18.0
Albuquerque, N. M.	18 0	20 0	*7.0	13.0

*One-cent city tax.

Effective March 1, 1934, discount to dealers with or without contract throughout Continental territory: Undivided dealer discount off service station price, 4 cents; divided dealer accounts, 3½ cents.

Standard Oil Co. (Indiana)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Chicago	15.3	17.3	4.0	9.7
Decatur, Ill.	16.0	18.0	4.0	10.2
E. St. Louis	16 0	14.5	4.0	9.5
Joliet	14.2	16.2	4.0	10.2
Peoria	14.7	13.9	4.0	10.2
Quincy	16.6	17.1	4.0	10.0
Davenport, Ia.	16.6	17.1	4.0	10.1
Des Moines	14 0	17.1	4.0	8.0
Mason City	16.6	17.1	4.0	9.3
Sioux City	13.9	13.9	4.0	9 7
Duluth, Minn.	17 2	19.2	4.0	10 4
Mankato	16.8	16 8	4.0	10 3
Minneapol's	14.9	16.9	4.0	10.4
LaCrosse, Wis.	18.2	20.2	4.2	10 8
Green Bay	17.7	19.7	5.0	10 2
Milwaukee	17.1	19.1	5.0	9.7
Madison	17.4	19.4	5.0	9.9
Detroit, Mich.	16.0	18.0	4.0	10.5
Grand Rapids	16.7	17.7	4.0	10.2
Saginaw	17 0	18.0	4.0	10.5
Evansville, Ind.	17.7	19.7	5.0	10 0
Indianapolis	17.9	19.4	5.0	10.2
South Bend	18 2	20.2	5.0	10.5
Fargo, N. Dak.	17.9	19 9	4.0	12 1
Huron, S. Dak.	18.8	20.8	5.0	11 4
Sioux Falls	18.4	20.4	5.0	10 9
Kans. C., Mo.*	15.0	15 0	4.0	9.2
Springfield	15.1	17.1	3.5	9.1
St. Louis	15.0	17.0	3.5	8 7
St. Joseph*	15.3	15.0	4.0	8.8
Wichita, Kans.	14.6	16.6	4.0	10 2
Bartlesville, Ok.	16.0	18.5	5.0	10.5

*State tax 3 cents, 1-cent city tax and 1-cent Federal tax.

Discounts to dealers, effective March 1, 1934: Undivided accounts, 4 cents a gallon on Red Crown Ethyl and Standard Red Crown, divided accounts, 3½ cents a gallon on Red Crown Ethyl and Standard Red Crown.

Stanolax Furnace Oil in Chicago

Effective June 27, 1934, f.o.b. Chicago, tank wagon prices: No. 1 (36-40 lt. stw. sere), under 100 gallons, 5¼ cents. Effective May 16, 1934, No. 2 (30-34 stw. sere), under 150 gallons, 7⅛ cents; No. 3 (22-26 sere), under 150 gallons, 7⅛ cents; No. 4 (13-16 sere), under 400 gallons, 6 cents; viscosity of No. 4, 90-115 at 100° F.; No. 5, under 400 gallons, 5⅝ cents. For deliveries above stated quantities deduct 1 cent.

Naphtha

	Tank wagon*
Oleum spirits	16 9
V.M.&P. naphtha	18.0
Cleaners' naphtha	18 0
Stanisol	18.0

*Prices include 3-cent Illinois tax, but not 1-cent Federal tax

Prices f.o.b. Chicago, September 15, 1933. Each of above prices subject to discount of 1 cent per gallon for 150-gallon lots if covered by contracts.

Southern District

STANDARD OIL CO. (KENTUCKY)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Atlanta, Ga.	19.0	22.0	7.0	14.5
Augusta	20.0	22 0	7 0	14.5
Macon	20 0	22 0	7 0	14.5
Savannah	20.0	22.0	7.0	14.0
Birm'ham, Ala.	20.0	22.0	8.0	12.0
Mobile	20 5	22 5	8.0	12.0
Montgomery	22 5	24.5	8.0	15.0
Jackson, Miss.	19.5	21.5	7 0	13 0
Vicksburg	14.5	16.5	7.0	14.0
Jack'ville, Fla.	20 0	22.0	8.0	11.5
Miami	20 0	22 0	8 0	13 5
Pensacola	17.0	19.0	5.0	13.5
Tampa	20.0	22.0	5.0	12.5
Lexington, Ky.	18 5	20 5	6 0	11 5
Covington	17.0	19.0	6.0	11 5
Louisville	18.0	20.0	6.0	11.0
Paducah	14.5	16.5	6.0	11.0

In addition to the state tax of 4 cents on gasoline, Montgomery has city and county tax of 2 cents on gasoline and one-half cent on kerosene. Kerosene prices in Georgia and Mississippi include 1 cent state tax; in Alabama, an inspection fee of one-half cent on kerosene and one-fortieth cent on gasoline; in Florida an inspection fee of one-eighth cent on kerosene and gasoline. To Pensacola, Mobile and Birmingham state taxes on gasoline add 1 cent city tax.

Southwestern District

MAGNOLIA PETROLEUM CO.

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Dallas, Tex.	17 0	19 0	5.0	8.0
Fort Worth	17.0	19.0	5.0	8 0
Houston	16.0	18.0	5.0	8.5
San Antonio	16.0	18.0	5.0	8.5
El Paso	18.0	20.0	5.0	11.0
Muskogee, Ok.	16 0	18.0	5 0	7.5
Okla. City	15.0	17.0	5.0	8.5
Tulsa	16 0	18 0	5.0	8.5
Ft. Smith, Ark.	16.6	18.6	5.0	8.0
Little Rock	16.5	18 5	7.5	9 0
Texarkana	17.0	19.0	5.0	8.0

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Atl'tic City, N.J.	19.0	18.5	4.0	10 0
Newark	18.3	17.8	4.0	9 5
Annapolis, Md.	19 6	19 1	5 0	10 0
Baltimore	19.1	18.6	5 0	9.5
Cumberland	20.6	20.1	5.0	13.7
Wash'g'n, D. C.	17 3	16 8	5 0	11 5
Danville, Va.	21.7	21.2	6 0	12.9
Norfolk	20.3	19.7	6.0	11.3
Petersburg	20.5	20.0	6.0	11 4
Richmond	20.5	20.0	6.0	11.7
Roanoke	21.8	21.3	6.0	12.9
Charle's. W. Va.	20.0	19.5	5.0	12.6
Parkersburg	19.3	18.8	5.0	11.2
Wheeling	20 0	19.5	5.0	12.3
Charlotte, N. C.	22.4	22.9	7 0	13.5
Hickory	23.7	23.2	7.0	13.7
Mt. Airy	23 7	23.2	7.0	13 5
Raleigh	23.2	22.7	7.0	13.2
Salisbury	23.5	20.5	7.0	13.6
Charleston, S. C.	21.2	20.7	7 0	11.3
Columbia	23.0	22.0	7.0	13 2
Spartanburg	23.4	22.4	7.0	13.5

Price basis to dealers: Divided dealers at dealer price, which is 3½ cents above tank car; undivided dealers at regular price less one-half cent. Discount for kerosene, 1 cent off tank wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except in New Jersey, where no discount is given.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Omaha	17.0	17.0	5.0	9.0
McCook	17 7	18.4	5.0	6.9
Norfolk	17.4	19.4	6.0	9.0
North Platte	17.0	17.0	5.0	9.0
Scottsbluff	18.3	18.3	5.0	9.0

Note—Discount to dealers, including any rentals under lease and agency agreements: Undivided accounts, Standard Red Crown and Red Crown Ethyl Gasoline 4 cents. Reliance (third brand) 3 cents, under service station price. Divided accounts, Standard Red Crown Ethyl Gasoline 3½ cents. Reliance (third brand) 2¾ cents, under service station price. Discounts to consumers covered only by form CD-1, official commercial consumer contract.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
N. Orleans, La.	20.3	15.0	*7.0	†10.0
Baton Rouge	20 2	19 7	6 0	†12 0
Alexandria	21.1	18.5	*7.0	†10.0
Lafayette	21.3	20 5	*7.0	†12.0
Lake Charles	21 2	20 7	*7 0	†12 0
Shreveport	19.0	15.5	6.0	†12.0
Knoxville Tenn	24.7	21.5	8.0	13.0
Memphis	23.1	21.5	8.0	10.5
Chattanooga	24.5	21.5	8.0	12.0
Nashville	24 0	21.5	8.0	11.0
Bristol	24.5	21.6	8.0	14.0

*Includes city tax of 1 cent. †Louisiana kerosene prices include 1-cent state tax.

Price bases to dealers: Divided dealers at dealer price, which is 2½ cents above tank car; undivided dealers at dealer price less one-half cent.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA*

	Gasoline: Tank wagon†	Gasoline: Posted retail	Gasoline: Incl'ds tax of	Kero. tank wagon
San Francisco	17.5	19.5	4.0	12.5
Los Angeles	15.5	17.5	4.0	13.5
Fresno, Calif.	18.0	20.0	4.0	14.0
Phoenix, Ariz.	20.0	22.0	6.0	‡16.0
Reno, Nev.	20.0	22.0	5.0	15.5
Portland, Ore.	20.0	22.0	6.0	13.5
Seattle, Wash.	20.0	22.0	6.0	13.5
Tacoma	20.0	22.0	6.0	13.5
Spokane	22.0	25.0	6.0	15.0

*Retail prices posted by Standard Stations, Inc., a subsidiary.

†Prices are at company's plant or depots, as company does not operate stations. A 4-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where the discount is 1 cent.

‡Includes 5 cents state tax.

Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Philadelphia, Pa.	15.5	17 5	4 0	10 0
Pittsburgh	16.0	18 0	4 0	10 0
Allentown	15.5	17.5	4.0	10.0
Erie	16.0	18.0	4.0	9 0
Scranton	16 0	18 0	4.0	10.0
Altoona	16 0	18.0	4 0	10.0
Dover, Del.	16.0	18 0	4.0	10.0
Wilm'ngton	15.5	17.5	4.0	9.0
Springf'd, Mass.	15 5	17.5	4 0	8.75
Worcester	15.5	17 5	4.0	9 0
Hartford, Conn.	15.0	17.0	3.0	8.5
New Haven	13 0	15.0	3 0	8 5
Providence, R.I.	8.0	10.0	3.0	8.5

Note—Tank wagon prices are those applicable to consumers purchasing lots of 100 or more gallons in one delivery.

New York and Part of New England

STANDARD OIL CO. OF NEW YORK

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Albany, N. Y.	16.0	17 0	4 0	9 0
Met. New York	16.5	17.5	4 0	8.5
Buffalo	17.5	18.5	4.0	9 0
Rochester	17.0	18.0	4.0	9.25
Syracuse	17 0	18 0	4.0	9.25
Boston, Mass.	13 5	14.0	4 0	8.5
Portland, Me.	13.2	13.2	5 0	8 75
Manch'ter N. H.	13.2	13 2	5.0	9.0
Burlington, Vt.	13 8	13 8	5.0	9.75

Commercial consumers allowed 2 cents discount below service station prices in accordance with CD-1 of oil industry's code.

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Ohio points	17.5	19.5	5.0	*13.5

*Includes state tax of 1 cent, effective July 22.

Canada*

IMPERIAL OIL, LTD.
Imperial 3-Star Gasoline

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Hamilton, Ont.	†21.5	24.5	6.0	17.5
Toronto, Ont.	†21.5	24 5	6.0	17 5
Brandon, Man.	30 3	33.3	7.0	21 3
Winnipeg, Man.	28 7	31.7	7.0	20.3
Regina, Sask.	29.0	32.0	6 0	21.5
Saskatoon, Sask.	31 3	34.3	6 0	24 3
Edmonton, Alta.	31.3	34.3	6.0	23.7
Calgary, Alta.	28.5	31 5	6.0	21.0
Vancouver, B.C.	†28.0	31.0	7.0	24.0
Montreal, Que.	24 0	27.0	6 0	17.0
St. John, N.B.	26.0	30.0	8.0	21.0
Halifax, N. S.	26.0	30.0	8.0	21.0

Imperial gallon used in Canada. †Governed by service station prices.

Maritime provinces, all dealers 4 cents off service station prices. All other provinces, open dealers 3 cents off service station price and 1 cent additional to 100 per cent accounts.

Retail Price Changes

Regular-Grade Gasoline and Kerosene

Continental Oil Co. July 30 reduced tank wagon and station gasoline 2 cents in Salt Lake City.

Standard Oil Co. (Indiana) June 23 reduced station gasoline 1½ cents in Minneapolis; June 27, reduced it one-half cent further; July 6, advanced it 1½ cents; July 9, reduced tank wagon gasoline one-half cent in Minneapolis.

Standard Oil Co. of Nebraska July 30 advanced tank wagon gasoline .4 cent and advanced station gasoline 2.4 cents in Norfolk.

Standard Oil Co. of Louisiana July 18 advanced station gasoline 3.5 cents in Shreveport; July 25, reduced it 1½ cents; August 1, reduced it 1½ cents further. July 30 reduced station gasoline one-half cent in Alexandria.

Standard Oil Co. of New Jersey July 26 reduced tank wagon and station gasoline .1 cent in Richmond. July 28, reduced tank wagon and station gasoline one-half cent in Petersburg. July 30, reduced station gasoline 2.5 cents in Salisbury.

Standard Oil Co. of New York, August 3, reduced tank wagon gasoline 2 cents and station gasoline 2½ cents in Boston. July 21, reduced tank wagon and station gasoline one-half cent in Albany.

RESTRAINED FROM USING TAX

The first recorded attempt of government officials to use tax funds in an effort to prevent taxpayers from seeking to reduce the gasoline tax apparently has failed.

Judge Charles E. White, sitting in circuit court at Niles, Mich., recently granted a temporary injunction restraining the board of supervisors of Berrien County, Michigan, from using $179 appropriated by the board as a contribution to the Michigan Board of Highway Education's efforts to defeat a forthcoming referendum on proposals to reduce the State's gasoline and motor vehicle weight taxes.

According to information reaching the American Petroleum Industries Committee, Judge White declared that the practice of spending public monies for such purposes not only was dangerous, but outside the power of the board.

Complainants charged that the board was appropriating the money to finance lobbying activities against the referendum, which was sponsored by the Automobile Club of Michigan, although the board declared the expenditure was made to assist in the distribution of printed matter bearing upon legislation.

Gasoline Buying Program Imparts Hopeful Feeling

(Continued from Page 24)

likely that a cut was in prospect to keep in line with the eastern product, for which a reduction was announced Monday of this week. Neutrals lacked active demand.

Kerosene was just holding its own. Wax was extremely weak with a price reduction looked upon as probable.

Gas oils for use as cracking stock were off about an eighth of a cent. Burning oils were in demand and somewhat scarce. It was believed that the present level of prices for these products was likely to stand until the advent of cool weather would afford an assured market for the winter.

NEWS FOR SALES DEPARTMENTS

Approves Modifications in Code of Fair Competition

The following modifications to the Code of Fair Competition for the Petroleum Industry were recently made and approved by Secretary Harold L. Ickes:

Article 5. Rule 3. Paragraph 7. "No one shall make any deviation from his posted price by means of rebates, allowances, concessions, benefits, scrip books or any other device whereby any buyer obtains any naphtha, gasoline, motor fuel, lubricating oil, grease, kerosene or heating oil at a net lower cost than the applicable posted price; provided, however, that commercial consumers may secure gasoline, motor fuel and other oils, on contract quantity basis under conditions established by the President after such conditions have been first considered and recommendations have been made in regard thereto by the Planning and Coordination Committee."

Article 5, Rule 17. "Refiners, distributors, jobbers, wholesalers, retailers, and others engaged in the sale of petroleum products shall not give away oil, premiums, trading stamps, free goods, or other things of value, or grant any special inducement in connection with the sale of petroleum products.

"Provided, however, that the President may grant specific exceptions to the provisions of this Rule after such matters have been first considered and recommendations have been made in regard thereto by the Planning and Coordination Committee."

Article 5, Rule 18. "Gasoline shall not be sold or delivered from tank wagons or trucks to motor vehicles except in emergency cases. Provided, however, that the President may grant specific exceptions to the provision of this rule after such matters have been first considered and recommendations have been made in regard thereto by the Planning and Coordination Committee."

It is further ordered that existing rulings, orders and interpretations of the above rules shall be read, construed and enforced in the light of these modifications.

CITY APPEALS TAX CHANGE

Further agitation for a change in the allocation of the Los Angeles, Calif., gasoline tax collections was urged by the Los Angeles Traffic Association in urging a unification of all local bodies seeking the change. A bill proposed by the Automobile Club would give the State Department of Public Works exclusive charge of all roads outside of the cities. The department would also be responsible for maintenance and development of city streets connecting present state highways. The unification planned by the Traffic Association will enable the Los Angeles bodies to present their appeals in a clearer and stronger manner.

WYOMING OIL SUIT REVIVED

In order to speed up the proceedings of a year old suit between the Continental Oil Co. and the State of Wyoming, District Judge C. O. Brown of Douglas ordered it to the Supreme Court. Continental was enjoined from doing business in Wyoming after challenging the constitutionality of the antidiscrimination law. This provides the Public Service Commission with authority to review all companies' operations over a long period of time. If the State wins this suit, many other major oil companies will face possible expulsion from the State.

SELLS SULPHUR PROPERTIES

Texas Gulf Sulphur Co. has agreed to issue 1,300,000 shares of its stock to the Delaware Gulf Oil Co. for the latter's sulphur interests which were acquired from the Gulf Production Co., subsidiary of Gulf Oil. Texas Gulf will receive a 50 per cent interest giving it full ownership in the sulphur deposits at Boling Dome and Long Point, Tex., and will also acquire other valuable sulphur properties and a 10-year option to acquire without additional compensation, all sulphur interests of the Gulf Production Co. in Texas. A special meeting of stockholders of Texas Gulf has been called for September 24 to increase the authorized stock to 3,840,000 shares from 2,540,000 shares and to approve the arrangement.

Texas Gulf has been operating these properties for some years under an arrangement with Gulf Production Co. under which Texas Gulf paid for erection of plants and development of the properties from its own funds, and was to be reimbursed for its expenditures out of earnings. When repayment was completed profits from the properties were to be 50-50 between Texas Gulf and the Gulf Oil subsidiary.

Since Texas Gulf's own wholly-owned property is nearing exhaustion, under the old arrangement 50 per cent of all futures profits from the sulphur business would have been paid to Gulf Oil. Under the new arrangement Texas Gulf gives a 33.85 per cent stock interest in exchange for Gulf Production's 50 per cent share in these future profits.

JULY AUTO PRODUCTION DOWN

The last two weeks in July saw a reduction in the production of automobiles which brought the monthly total to 250,000 or 260,000 as against 280,000 the estimated figure. This production drop will be felt in the retail automobile market soon and will in turn influence the gasoline sales, causing a decrease sometime in August.

In spite of the difficulty of making accurate predictions of the August automobile production, experts place it at 200,000. The probability of a change in manufacturing schedules in the month of August makes estimates of the monthly figure of questionable accuracy. If the predictions are borne out the figure will be slightly below that of last year. This seasonal trend in automobile manufacture will be felt in the gasoline industry in late August and September.

Leland V. Stanford » » »

LELAND V. STANFORD, vice president of the Sinclair Refining Company, is often referred to as a European commuter. In charge of the export department of the Sinclair company, over the past 10 years he has often made as high as four round trips to Europe yearly keeping in touch with Sinclair customers in France, Germany and other countries.

While Mr. Stanford has been connected with the domestic and foreign marketing activities of the Sinclair company since 1919, previously he had a varied experience in the oil business, covering all phases of operations. Reared in Independence, Kans., when that city was an important center in the oil activities of the Mid-Continent, he was employed in the fields while still a youth and was sufficiently familiar with cable tool operation to run tower. After graduating from St. Mary's College in Kansas in 1908 he engaged in other lines of business for a time, but in 1913 became active in oil operations again. He was engaged in drilling wells for a time and for two years was in charge of a refinery in southeastern Kansas.

He was in France during 1918 with the A.E.F., and in 1919 when he returned to this country he joined the Chicago sales office of the Sinclair company, where he became assistant division manager. He was transferred to Philadelphia in 1921 when he became vice president of the Union Petroleum Company, a marketing organization with large export operations, which had been purchased by the Sinclair interests. He went to the New York offices of the company in 1923 when the Union company was merged with the Sinclair Refining Company, and was placed in charge of the export department, an important factor in Sinclair operations.

Recently Mr. Stanford was elected a director of the Consolidated Oil Corp., the parent company of the Sinclair interests. His offices are located at 45 Nassau Street, New York City.

Amazon Institutes New Suit Attacking Oil Code

Attacking the laws creating the NRA and the oil administration, and declaring that they made the President a "supreme dictator," the Amazon Petroleum Corp., backed by several East Texas companies, filed a suit this week with the supreme court. The suit seeks to prevent the enforcement of provisions of the oil code. Beginning in a district court in Texas, the movement was there supported, but the Fifth Circuit Court of Appeals reversed the decision enjoining the federal agents from enforcing the rulings. Following this last decision, the plea was made in Washington. It is the third of its kind to reach the supreme court.

It was further claimed by the oil companies that while affecting to control interstate commerce in its code rules, it was actually trying to force down oil production figures to bring higher prices. Federal agents, trespassing on their property and threatening civil prosecution drove the oil companies to the legal action, they said. If the suit is successful in Washington, it will affect only the oil section of the act and would not touch the constitutionality of the NRA itself.

CONTINENTAL SHOWS PROFIT

Reporting a profit for the first half of 1934 as against a loss for the same period last year, the Continental Oil Co. published its report as of June 30. The quarterly net profit was $1,165,829 after taxes, intangible development costs, depletion, depreciation, interest and minority interest, equivalent to 25 cents a share on 4,738,593 shares (par $5) of capital stock. This compares with net profit of $1,211,483, or 25 cents a share, in preceding quarter and net loss of $2,135,722 in June quarter of previous year.

For six months ended June 30, last, net profit was $2,377,312 after taxes and charges, equal to 50 cents a share, comparing with net loss of $4,960,969 in first half of 1933.

Current assets, as of June 30, last, including $9,670,864 cash, certificates of deposit and U. S. Government securities, amounted to $35,646,722 and current liabilities were $6,018,242. This compares with cash and U. S. Government securities of $7,572,246, current assets of $27,262,571 and current liabilities of $5,167,100 on June 30, a year ago.

RAILROAD BILL DEFEATED

Two bills, drawn by railroad attorneys and regarded as among the most drastic ever designed to curb highway transportation, have been defeated in Louisiana. Opponents charged the measures would not only have imposed unnecessary regulation on motor truck and bus companies, but would have enormously increased the cost of highway transportation.

One measure proposed so to amend the state constitution as to put all commercial motor transport companies under the supervision of the Louisiana Public Utilities Commission. The second gave the commission the necessary powers to fix rates, promulgate regulations, etc. The first measure did not come to a vote, while the second was vetoed by the governor.

Governor O. K. Allen, in vetoing the legislation, said: "This character of legislation has been carried to an absurdity. I cannot charge each person who operates a vehicle with knowledge of such lengthy and technical statutes as this.

NATURAL GASOLINE MANUFACTURE

June California Natural Market Closely Balanced

Supply and demand for natural gasoline in California showed June totals differing by only 5 bbls. The daily average production, which has been quite constant for many months, showed little change during June, amounting to 32,289 bbls., an increase of 1,014 bbls. daily over May production. Daily average utilization increased 3,602 bbls., offsetting the decrease of 2,932 bbls. in daily shipments. Stocks were virtually unchanged, increasing 5 bbls. daily during June, and amounting to 2,465,474 bbls. at the end of the month.

NATURAL GASOLINE PLANT OPERATIONS
June, 1934

Field—	Gas treated (M.C.F.)	Natural gasoline produced (gallons)
San Joaquin Valley:		
Elk Hills	75,518	134,494
Kettleman Hills	8,255,162	10,951,462
Midway-Sunset	1,534,437	2,722,106
Mountain View	47,014	76,878
Miscellaneous	361,741	456,684
Coastal Region:		
Elwood	231,946	390,194
Rincon	75,075	80,726
Santa Maria	166,693	421,053
Ventura Avenue	3,097,743	3,485,739
Miscellaneous	264,216	287,294
Los Angeles Basin:		
Coyote	550,623	995,116
Dominguez	785,509	1,545,324
Huntington Beach	2,709,153	3,439,587
Inglewood	133,755	188,813
Long Beach	2,270,165	6,827,481
Playa Del Rey	188,407	595,718
Richfield	476,506	630,167
Rosecrans	475,999	584,982
Santa Fe Springs	3,044,574	5,226,027
Seal Beach	450,293	624,266
Torrance	107,364	224,157
Miscellaneous	251,136	756,623
Total (all fields)	25,373,032	40,684,691

DISTRIBUTION
(Gallons)

Stocks beg. of month	3,773,677	.....
Production dur. month	40,684,691	.....
Delivered to refineries	.....	36,364,948
Delivered to jobbers, brokers or blenders	.....	3,997,741
Blended at plants for production of motor fuel	.....	3,545
Losses	.....	230,938
Stocks end of month	.....	3,361,196
Total	44,458,368	44,458,368
Liquedfied petroleum gas production	759,794	.....
Motor fuel produced	5,667	.....

SUPPLY AND DEMAND
(Barrels)

	Natural gasoline inc. liquefied petroleum gas	
Supply	June	May
Total production	32,892	31,767
Stock transfer (deliveries) receipts—net	(397)	(170)
Net total	32,495	31,597
Deduct refinery requirements:		
Runs to stills	4,056	3,961
Blended	25,390	21,883
Total	29,446	25,844
Add refined output:		
Natural gasoline—net	175	75
Net refined production	175	75
Net current supply	3,224	5,828
Demand		
Domestic demand including bunkers	709	687
Shipments to Alaska and Hawaii	5	5
Rail and truck shipments to U.S. points outside Pacific Coast territory	...	8
Demand in domestic market area	714	690
Shipments: Pacific foreign inc. Canal Zone	.....	2,924
Total market demand	714	3,614
Losses (gains) unaccounted for—net	2,505	2,485
Total current demand	3,219	6,099
plus or (deficit)	5	(271)

No Increase Expected in the Gasoline Output as Result Sour Gas Ruling

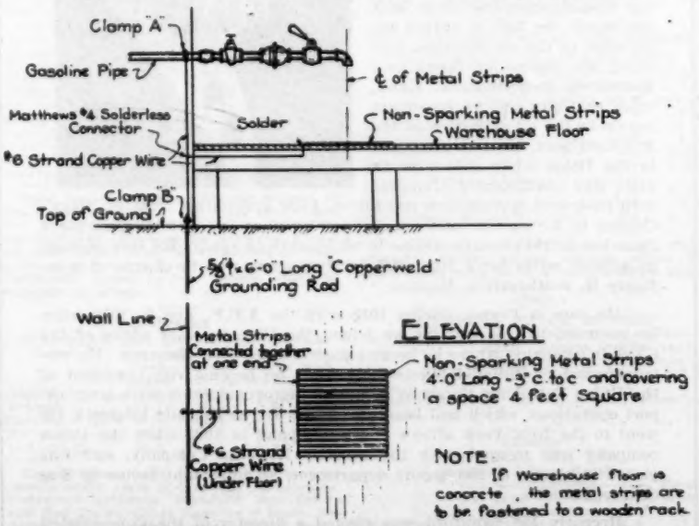
The action of the U. S. District Court sitting in Houston in upholding the constitutionality of the Panhandle sour gas law has had a sobering effect upon both sides in the long legal battle waged by landowners against the major pipe line companies. The natural gasoline industry has been an interested onlooker for the decision will have a direct bearing upon the course of natural gasoline production in that area over the future. It is the general belief that there will be but little increase in the output of natural gasoline as a result of the decision and that the pipe line companies will formulate some sort of plan for ratable purchases that might actually cut down the volume of natural gasoline to be made in the Panhandle.

Every one familiar with the problem realizes that many companies now operating natural gasoline plants in the Panhandle are doing so to make the best of a bad situation. As a group they do not sanction the waste that comes from processing unlimited quantities of gas through the plants without regard to utilizing the residue. They revised their plans to take advantage of the sour gas law, not because they favored the law but because they were obligated to utilize the gas from under their properties in the only manner possible at the time and before that gas would migrate to another point. The result was an increase of from 40 to 50 per cent in the gasoline output in the Panhandle. At present the total production from the field is close to 45 per cent higher than at the same time a year ago. The total for the first half of this year is about 30 per cent higher than the total for the same period last year. In that period the Mid-Continent has felt the effect of this increased production in the form of price cuts on all grades of natural. For more than 50 per cent of the past 6 months, 26-70 natural gasoline has sold below the posted price of 36 gravity Mid-Continent crude. It has gone as low as seven-eights cents a gallon on a few sales and the royalty paid on the gas is of course proportionately low so that the landowner has felt the effect of these low prices also. So far as the producer and landowner is concerned, he sees a reserve being dissipated with but little revenue coming in and is now beginning to witness a falling off in the gas pressure. Until this point, the general attitude was that the supply of gas would be inexhaustible and there was no chance to instill interest in the modification or repeal of the law on this score.

Several companies now report appreciable reductions in the quantity of gas coming to their plants compared to 6 months ago and it is also true that new connections are being made each month among some plants in order to hold up their production.

Although an appeal from the decision of the district court has been requested and the issue can not be considered closed, it is becoming apparent that the pipe line companies are more willing to reconsider their position in the matter. They know the landowners and gasoline plant owners have not realized the profits they had hoped for and with the winter season ahead, they will be in a position to take larger quantities of gas so, they are now in the best trading position they have been in at any time. A plan for the ratable taking of gas and a federal control of production for stripper plants will go a long way toward improving prices generally and in the long run there will be substantial profits for all.

Method of Grounding Lines Used in Filling Cylinders


Clamp A
Gasoline Pipe
℄ of Metal Strips
Matthews #4 Solderless Connector
Solder
Non-Sparking Metal Strips
Warehouse Floor
#8 Strand Copper Wire
Clamp B
Top of Ground
5/8"x6-0" Long "Copperweld" Grounding Rod
Wall Line
Metal Strips Connected together at one end
ELEVATION
Non-Sparking Metal Strips 4'-0" Long - 3" c. to c. and covering a space 4 Feet Square
#6 Strand Copper Wire (Under Floor)
NOTE
If Warehouse floor is concrete, the metal strips are to be fastened to a wooden rack.

The hazards encountered in filling small containers with natural gasoline and by-products of natural gasoline make it imperative that a dependable method of grounding the lines and container be used. The drawing is self-explanatory and depicts an actual arrangement in use

Circuit Court of Appeals to Judge Sour Gas Law

Appeals to the Fifth Circuit Court at New Orleans were seen as a possibility following the dismissal in Houston of suits attacking the constitutionality of the sour gas law. Judge Thomas M. Kennerly held that the bill permitting the stripping of natural gasoline from gas in the Texas Panhandle was constitutional and that the Railroad Commission had the authority to create the bill.

Six suits were involved in this controversy. They were: J. T. Sneed vs. Phillips Petroleum Co. and others; E. C. Britain vs. Shamrock Oil & Gas Co.; Henry Schafter vs. L. R. Hagy and others; Frank Carmichael vs. Smith Brothers Refining Co. and others; T. C. U. and others vs. Continental Oil Co. and others; T. M. C. U. and others vs. Huber Petroleum Co. Attorneys of one of the plaintiffs said that the appeal would probably be taken to the Court of Appeals in New Orleans.

The terms of the sour gas law permit the stripping of natural gasoline from the natural gas in the Panhandle Field and the disposal of the residue gas in any way that the operators see fit. At present the bulk of this residue gas is being vented to the atmosphere, and it is believed that the practice will rapidly deplete the field.

Turner Valley Plant to Make Finished Gasoline

CALGARY, Alberta, Aug. 4.—The new gasoline absorption plant of Gas & Oil Products, Ltd., now under construction on the Mercury lease in Section 4-19-2w5, South Turner Valley, will, according to a recent statement of A. H. Mayland, head of the company, be in operation by September 1. It will increase the naphtha output of the field at least 500 bbls. a day. The plant has a daily capacity of at least 80,000,000 feet of wet gas, and will handle gas from a number of independent producers, including Mercury Oils, Ltd., which has a controlling interest in the enterprise.

Gasoline as it comes from the plant will be suitable for use in motor cars, being a slightly higher grade than commercial gasoline. It has not been decided whether the absorption plant gasoline, heretofore used for blending with crudes, would be placed on the market at a cheaper price.

The Royalite Oil Co.'s absorption plant, which commenced operations in May, 1933, last fall increased its capacity to between 115,000,000 and 130,000,000 feet a day. Its operation has proved very satisfactory, and as a result a number of wells which ordinarily would not have been profitable to operate with separators have been continued in production.

It is estimated that in the history of the Turner Valley Field, some hundreds of thousands of barrels of naphtha have been burned in the waste gas flares owing to the inability of the separators in general use to secure complete naphtha recovery. With the absorption plant process, however, practically all of the naphtha is extracted and the waste gas ultimately burned is perfectly dry.

A proposal originally made to operate a carbon black plant to utilize the residual dry gas from the absorption plant was dropped by the sponsors of the project. It is estimated that a really efficient carbon black plant would cost approximately $1,000,000 to install.

Late Fields

OKLAHOMA

An agreement was reached between the operators in the Fitts Field in Pontotoc County to limit producing wells to 200 bbls. per day production and on this basis the field may be prorated. As none of the older wells in the field can exceed this quantity of daily production, the curtailment will affect only the new big wells.

Nearly every big oil company in Oklahoma has men in the Fitts area in southern Pontotoc County and northern Johnston County trying to buy leases, following the near completion of the Delaney & Shaffer and Crosbie & Moran wells in Section 30-2-7. The only big company that was interested in this area was the Magnolia Petroleum Co. and it is reported that this company and another big company are desirous of purchasing the Delaney holdings in the area. W. L. Delaney is an Ada lawyer, with a lot of faith in the Fitts area. He blocked a large portion of it and has handled it well taking in drilling companies as partners on one or another lease. It looks at this time as if he would come out of the territory a very rich man.

The Stanolind Oil & Gas Co. and Amerada Petroleum Corp.'s No. 1 Suneram, NE cor. Section 6-13-3w, Oklahoma County, a southwest offset to the discovery well in the Edmond Pool, is one of the most important wells of the year on its initial showing. It had Wilcox sand at 6,588-6,668 feet and after cleaning itself out it produced 275 bbls. in one hour; 335 bbls. the second hour; 355 bbls. the third hour and then was pinched back to 275 bbls. the fourth hour after which it was shut in. The discovery well, Mid-Kansas Oil & Gas Co.'s No. 1 Messer, which was completed in November, 1930, and shut in until this year, is permitted to produce 300 bbls. per day.

The Gypsy Oil Co. and others' community test, No. 1 Harris, in C SE NW Section 27-13-4w, Oklahoma County, which was drilled to a total depth of 7,482 feet, the bottom of dry Wilcox sand, and which was plugged back to the bottom of a sand at 6,790-6,805 feet and tested, was abandoned and will be plugged.

WEST TEXAS

FORT WORTH, Tex., Aug. 7.—Humble Oil & Refining Co.'s No. 1 Means, Section 2, Block A-35, P.S.L. Survey, new discovery in Andrews County, is showing for a better well. It flowed 251 bbls. in 24 hours ending 7 a. m. today, with 2 per cent basic sediment and wash water.

SKELLY WAGE ADJUSTMENT

An increase for field employes in the production department was announced Monday by the Skelly Oil Co. effective August 1, according to Ab Jenkins, superintendent for the company's Oklahoma City properties.

Mr. Jenkins said "although business at this time does not justify the wage increase, the change was made because of the increased price of commodities, and, consequently, the higher cost of living for our employes."

Approximately 83 employes in the Oklahoma City district will receive increased pay Jenkins said. He estimated that a total of 2,000 men would be affected throughout the Skelly organization.

Analysis of the distribution of the increase, showing classification of work, the old hourly rate of pay and the new hourly wages, follow:

Classification	Old	New
Roustabouts	64	71
Switchers	67	74
Pumpers	67	73
Cable Tool Drillers	1.00	1.00
Cable Tool Helpers	80	88
Clean-out Drillers	90	95
Clean-ou. Helpers	70	75
Truck Drivers, Light	64	71
Truck Drivers, Heavy	70	77
Tractor Drivers	70	77
Gang Pushers	70	77
Carpenters	75	80
Painters	67	74

Bureau of Mines Report on Petroleum and Refined Products for June

Crude Petroleum: According to reports received by the Bureau of Mines, Department of the Interior, the production of crude petroleum in the United States during June totaled 80,040,000 bbls. This represents a daily average of 2,668,000 bbls., which is 92,000 bbls. above the daily average of the previous month but 94,000 bbls. below that of June, 1933, the peak month of a year ago.

As was the case in May, practically all of the producing states increased their output in June. The largest increase, 30,000 bbls. daily, was recorded in California, the daily average for which increased from 486,000 bbls. in May to 516,000 bbls. in June. Production in Texas also showed a sizable increase, rising from 1,079,000 bbls. daily in May to 1,108,000 bbls. daily in June. Practically all of the increase in Texas in June was recorded in the East Texas Field, where the daily average output reached a new high mark for the year of 553,000 bbls. Drilling in East Texas continued at a relatively high rate; in fact, there were 25 more oil wells brought in during June than were completed in May. The daily average production in Oklahoma increased 20,000 bbls. over that for May, or from 531,000 bbls. daily to 551,000 bbls. daily in June. This gain was quite generally distributed over the State. The new fields of Bosco and Roanoke in the Louisiana Gulf Coast became factors in production in June, with the result that the State's output continued to increase.

Stocks of refinable crude oil continued to increase, totaling 357,239,000 bbls. on June 30, compared with 355,833,000 bbls. on hand June 1. The largest increase in crude stocks in June was in tank farm stocks of East Texas crude.

Refined Products: Although the percentage yield of gasoline declined in June as compared with May, the increase in crude runs was relatively greater so that the daily average production of motor fuel increased from 1,163,000 bbls. in May to 1,184,000 bbls. in June. The indicated domestic demand for motor fuel was 36,296,000 bbls., or a daily average of 1,210,000 bbls. Although this figure is below those for the previous month and for a year ago, it should be noted that because of pre-tax and speculative buying in June, 1933, and May, 1934, the data for the three months are not comparable. However, indications point to an increase of 6 or 7 per cent in demand for June, 1934, over what it normally would have been a year ago.

According to the Bureau of Labor Statistics, the price index for petroleum products during June, 1934, was 50.6, compared with 50.7 in May and 34.4 in June, 1933.

The refinery data of this report were compiled from refineries with an aggregate daily recorded crude oil capacity of 3,522,000 bbls. These refineries operated during June at 72 per cent of their capacity, given above, which compared with a ratio of 70 per cent in May.

STANDARDIZATION CIRCULAR

The American Petroleum Institute's Division of Production has issued Circular S-444 as a report covering the meeting of the Committee on Standardization of Rigs and Derricks held at Pittsburgh, Pa. Decisions as to changes in, or additions to, standard specifications reached at Pittsburgh, it has been announced, are to be made effective by the issuance of a supplement to the Derrick Specifications. Upon completion, copies will be sent to all committee members, licensees, and handbook owners.

Certain exhibits, available at Pittsburgh, have not been reproduced in Circular S-444, but will be presented in Production Bulletin 213, which will replace the usual Standardization Bulletin and will be issued from the Institute's New York office. Copies are to be sent to all members of the Standardization Committee and of the Division of Production. A limited number of the exhibits, in mimeographed form, still are available at the Institute's Dallas office and will be sent, upon request, to committee members.

LION OIL PURCHASE

EL DORADO, Ark., Aug. 6.—Lion Oil Refining Co. of El Dorado has purchased the holdings of the Pure Oil Co. in Union and Ouachita Counties. Among these properties involved are leases on 374 acres of land in the Smackover Field north of El Dorado. There are 28 producing wells on the property. Average daily production is 390 bbls.

The oil will be piped direct to the Lion refinery in El Dorado, according to Col. T. H. Barton, president.

The Oil Man's Calendar

August

24-27—Titusville, Pa., Drake Well Memorial Celebration.

September

9 — Wernersville, Pa., American Trade Association executives.

10-14 — Cleveland, Ohio, American Chemical Society.

11-12 — Louisville, Ky., Kentucky Petroleum Marketers Association, Brown Hotel (dates tentative).

12-14—Atlantic City, N. J., North American Gasoline Tax Conference, Claridge Hotel.

19-21 — Atlantic City, N. J., National Petroleum Association.

26-27 — Columbus, Ohio, Ohio Petroleum Marketers Association, Deshler-Wallick Hotel.

October

1-5—Cleveland, Ohio, National Safety Council, Cleveland, Statler, Carter and Hollenden Hotels.

9—Michigan Independent Petroleum Distributors Association, place to be named later.

12-13—American Institute of Mining Engineers, Petroleum Division, fall meeting, Tulsa, Mayo Hotel.

16-18—Big Four State Jobbers Association Convention, Kansas City, Mo.

29—American Gas Association Convention and Exhibition, Atlantic City, N. J.

November

5-9—Cleveland, Ohio, Automotive Service Industries Show, Cleveland Public Auditorium.

Los Angeles, Calif., American Association of Petroleum Geologists, Pacific section.

12-15—Dallas, Tex., annual meeting, A.P.I.

December

3-8—New York, National Exposition of Power and Mechanical Engineering, Grand Central Palace.

January

7—New York, Society of Automotive Engineers, annual dinner.

Actual Overproduction "Almost" Thing of Past

AUSTIN, Tex., Aug. 6. — "Hot" oil running in the East Texas oil field is at the lowest ebb in several months, E. N. Stanley, chief enforcement officer for the Texas Railroad Commission, claimed here today.

The chief difficulty in enforcement, he said, now centers around "oil theft," which is comprised of tapping pipe line by thieves.

He said the commission had brought virtually all transportation agencies under control by last Saturday's order requiring tenders, which show the legality of oil, on all crude products, as well as crude.

Most hot oil had been moving from the field as "crude tops" or other by-product.

"We're seeing daylight over there for the first time in my experience," Stanley said. "We will be in fine shape now until another racket breaks out. Actual ovrproduction at the well is almost a thing of the past."

TEMPORARY COMMUNITY ORDER

Approving a temporary order of the Oklahoma Corporation Commission directing the Community Natural Gas Co. to charge 10 cents per 1,000 feet less on its books for gas purchased from the affiliated Lone Star Gas Co. and pass the saving to consumers, the State Supreme Court has ruled that companies operating intrastate in Oklahoma cannot set up intercorporate relationships as a barrier to state regulation of utility rates.

The court ruling, in effect, approves the temporary 30-cent gate rate set up by the commission on the information submitted at a rate hearing by the two operating companies of the Lone Star Gas Corp. of Pittsburgh, Pa., and is taken as an indication that the commission may make a permanent order upon further hearing.

SOUTHWESTERN OFFICERS

W. T. Doherty, of the Humble Oil & Refining Co., Houston, Tex., has been elected chairman of the southwestern district, a unit of the American Petroleum Institute's Division of Production, to serve for 1934. Other 1934 officers are:

Vice chairman, E. V. Foran, Texon, Tex.; vice chairman for East Texas, Carl E. Reistle, Jr., East Texas Engineering Association, Kilgore, Tex.; vice chairman for Gulf Coast, C. E. Sutton, Pure Oil Co., Houston, Tex.; vice chairman for North Texas, Joe Cable, Wichita Falls, Tex.; vice chairman for Arkansas-Louisiana, M. E. Wilson, Lion Oil & Refining Co., El Dorado, Ark.; and secretary-treasurer, W. V. Vietti, Texas Co., Houston, Tex.

T. E. Swigart, of the Shell Petroleum Corp., Houston, was elected chairman of the advisory committee.

START TANKER DELIVERIES

PORT EVERGLADES, Fla., Aug. 4.—First cargo of gasoline to go into the new tanks of the Standard Oil Co. of Kentucky here was discharged recently from the tanker O. T. Waring. Approximately 20,000 bbls. of gasoline will be unloaded and the first of the new tanks to be completed will be put into use.

OPERATES NEW PIPE LINE

The new pipe line of the Dickey Oil & Refining Co. was recently put into operation. This 4-inch line runs from the Chindberg and Nordling, Kansas, pools to the refinery at McPherson. From here the finished products are trucked to the consumption areas in Kansas, Colorado and Nebraska.

INDIANA DIVIDEND

CHICAGO, Aug. 6.—Directors of the Standard Oil Co. (Indiana) today voted a dividend of 25 cents a share payable September 15 to stockholders of record August 15.

NEWS FOR PETROLEUM REFINERS

Oils Used in Federal-Aid Projects Taxable

Recently the question was raised with the Bureau of Internal Revenue as to whether or not the federal tax on gasoline and lubricating oil would apply to sales of these products made to states and political subdivisions thereof where payment is made from funds obtained from the Federal Emergency Relief Administration, Washington, D. C. D. S. Bliss, deputy commissioner of the bureau has made the following reply in connection therewith:

"Reference is made to the taxability of lubricating oil and gasoline, under sections 601 (c) (1) and 617 of the Revenue Act of 1932, as amended, sold to states and political subdivisions thereof where payment is made from funds obtained from the Federal Emergency Relief Administration, Washington, D. C.

"You are advised that where a state or political subdivision thereof disburses funds obtained by way of gratis from the Federal Emergency Relief Administration, the state or political subdivision thereof is held to be acting in its own behalf and not as an agency of the United States. The funds after having been granted by the Federal Emergency Relief Administration become the funds of the state to which granted and are not, thereafter, the funds of the United States.

"Sales of lubricating oil or gasoline by manufacturers, producers, or importers thereof direct, or to dealers for resale direct, to states or political subdivisions thereof for use in connection with the exercise of essential governmental functions are not subject to tax under Sections 601 (c) (1) and 617 of the Revenue Act of 1932, as amended, because of the constitutional inhibition against taxing the instrumentalities of a state in the performance of such functions, provided payment is made from public funds of the states or political subdivisions thereof. However, the taxes attach where such sales are made to states or political subdivisions thereof when the articles are used in the exercise of proprietary functions."

The Bureau of Internal Revenue has also informally stated that the foregoing applies in all states except Massachusetts, Oklahoma, and North Dakota, where, it is understood, the federal government is administering all relief work.

MAGNOLIA IN TENNESSEE

NEW YORK, Aug. 6.—The Magnolia Petroleum Co., a subsidiary of the Socony-Vacuum Oil Co., Inc., has announced plans for locating distributing warehouses at Chattanooga, Memphis, Nashville and Knoxville, the four largest cities in Tennessee. The establishment of these warehouses will mark the entry of Socony-Vacuum products into Tennessee. The Magnolia company at present is a large distributor in Oklahoma, Texas, Arkansas and Louisiana.

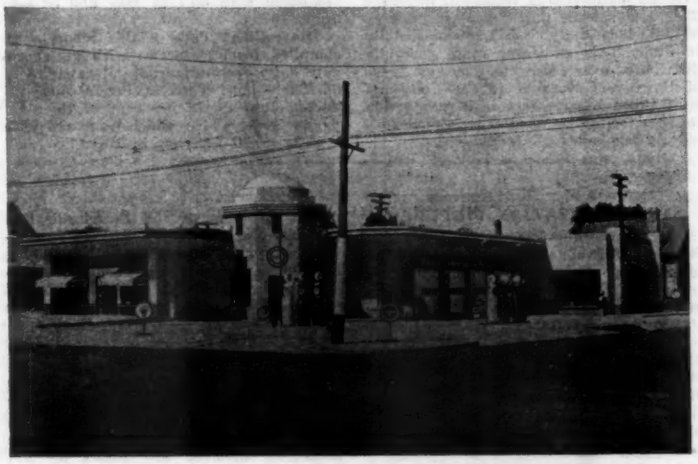
The Socony-Vacuum company recently made arrangements to distribute its products in New Jersey and it is expected that this distribution will be extended to include several Atlantic Seaboard and southern states where its products are not obtainable at this time.

It was also announced last week that the Socony-Vacuum company had acquired the marketing facilities of the Queen City Petroleum Products Co., located in Cincinnati. This independent jobbing company has been handling Socony-Vacuum products for several years.

New Retail Combination Features Pure Oil Service and Kroger Merchandise

A unique arrangement in service stations is shown in this combination Pure Oil Lubridome and Kroger market. This new development is housed in a very modern and attractive building in the best residential section of Indianapolis. Such a combination results not only in larger sales volume but cuts building costs and permits the use of more expensive and desirable locations. While shopping in the market, it is very convenient for the customer to have his automobile serviced. On the other hand, the store benefits from its proximity to the station. Free parking is furnished to customers of the Kroger markets.

The building and grounds are well lighted and advertised with neon lights, and a well-planned approach makes it very accessible. The station was opened during the latter part of May and while it might be looked upon as an experiment due to its uniqueness it already has shown that it is going to be one of the largest gallonage outlets in the division. There is reason to expect that this type of station will be more extensively used in the future by chain stores and oil companies.



Combination Pure Oil Lubridome and Kroger Store at Indianapolis

Company Earnings Higher During the First Half 1934

Operations in the oil industry in the first six months, despite increased labor costs in refineries, in the field and in marketing under the oil code, were on the most profitable basis for any first half year period since 1930 and in sharp contrast with results for the like period of 1933 when substantial losses were recorded, a synthesis of the reports of 13 oil companies reveals, according to the Wall Street Journal.

As a group, these companies showed a net profit of $23,352,518 for the first six months this year as compared with a net loss of $23,761,614 in the like 1933 period and a net profit of $11,052,328 in the first half of 1932. In 1931 severe losses were recorded in the first half.

Net profits for 12 of the companies for the quarter ended June 30 amounted to $10,617,608 as compared with a net loss of $3,815,460 in 1933 and a net profit of $11,733,054 in the like 1932 quarter.

Demand for petroleum and petroleum products increased this year, reaching the highest total for the six months for any similar period since 1930. In the first six months this year, using Bureau of Mines figures, total demand for all oil amounted to 504,083,000 bbls. as compared with 461,930,000 bbls. in 1933, an increase of 42,153,000 bbls. or 9.1 per cent. This coupled with stabilized crude oil quotations and improved prices for products, particularly fuel oil and gasoline, accounted for the betterment in operating results.

During the first half of the current year posted prices for crude oil remained unchanged at $1 a barrel for 36 gravity crude in Mid-Continent fields and at a similar flat price for East Texas crude. This is in direct contrast to the first half of 1933 when posted prices for crude oil fluctuated sharply. Price of East Texas crude was reduced in May of last year to a low of 10 cents a barrel and 36 gravity Mid-Continent crude to 25 cents a barrel.

REFINING COMPANY FORMED

Plans for a refinery to process Michigan crude oil have been completed by the Wayco Refining Co. The refinery which is to be situated in Toledo will have a capacity of 10,000 gallons of lubricating oil and grease per day. John N. Stalker, former president of the Union Guardian Trust Co. of Detroit, heads the new organization.

BUYS OHIO STATION

The Socony-Vacuum Oil Co. has entered Cincinnati and Southwest Ohio territory, operating its own service stations.

Socony-Vacuum has acquired the service stations operated in Cincinnati by the Queen City Petroleum Products Co., which has handled Socony-Vacuum Products in Cincinnati for the past four years. Distribution facilitates for the Southwest Ohio region will now center in Cincinnati.

Pennsylvania Refiners to Curtail Crude Runs

OIL CITY, Pa., Aug. 7.—Curtailment of Pennsylvania grade crude oil output and reduction of runs to stills is definitely in prospect today as five leading refiners advised their crude suppliers in the grade oil region of their decision to set future requirements under current schedules.

Typical of the letters sent to producers by the refining companies is one stating that runs to stills must be reduced 10 per cent under the daily average runs in the period October 1 to March 31 and the producer must cut his output by the same margin. The South Penn Oil Co., which purchases crude oil for Pennzoil, has for many years provided the ratable contract which is now being generally adopted. The Sinclair and Socony-Vacuum companies have similarly maintained an undisturbing position. Increased runs to still in the past month have boosted crude production in the grade area by nearly 10,000 bbls. a day and the present move of the refiners to avert further breakdown in the refined product markets should serve to stabilize the neutral, steam refined and bright stock markets immediately and avert an imminent cut in the crude oil price postings. The bright stock markets have been particularly affected, dropping by more than 6 cents in the past two weeks.

RICHFIELD BONDS FILED

NEW YORK, Aug. 6.—The reorganization committee of the Richfield Oil Co. announced here this week that more than 50 per cent of the outstanding bonds of the Richfield and Pan American companies had been received. The outstanding Richfield bonds total $24,981,000 and of this total $13,024,500 are on deposit with $5,307,000 of the $10,441,400 Pan American bonds on deposit. Of the unsecured claims which total approximately $18,000,000, 52 per cent have been deposited with the committee.

The committee has announced that deposits will be received until the foreclosure decree has been signed by the court. The date of sale of the properties will be fixed at that time. The committee is acting on the basis of an offer made for the Richfield properties by the Standard Oil Co. of California.

REVOKES PACIFIC ORDER

Nathan R. Margold, chairman of the Petroleum Administrative Board, today announced the revocation of an order issued July 21, 1934, which permitted small lot deliveries of gasoline to commercial consumers in the Pacific Coast area during a shortage of supplies caused by recent labor difficulties.

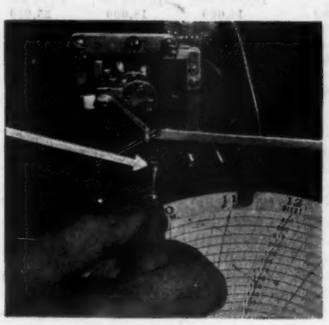
Chairman Margold explained that the emergency now was over in most of the territory. However, because of a slight shortage still existing in Oregon and Washington, the new order permits small lot deliveries in these states by committees representing the distributors. This provision will be in force only until the board is advised adequate supplies are available.

URGE REPEAL OF TAX

Repeal of gasoline tax was urged last night by Chas. H. Ingersoll of East Orange, N. J., tax relief candidate for Governor, at a meeting of the Taxpayers' Protective League in Newark. Mr. Ingersoll would substitute land rent for relief and other needs.

"It's something worth thinking about...."

"Every user of temperature control instruments in the petroleum industry should read the new Taylor booklet, 'A Triumph of Scientific Research.' This description of the Taylor 'Fulscope' gives you an insight into what really modern control equipment can accomplish. It's so readable even I could understand it . . . "



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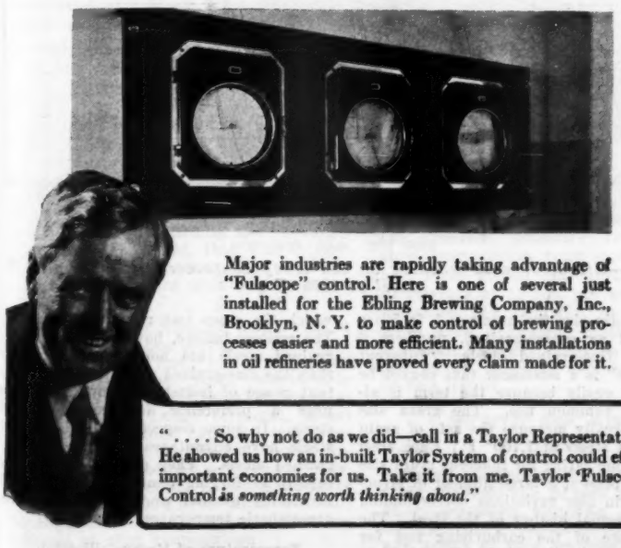

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TEMPERATURE, PRESSURE *and* FLOW INSTRUMENTS

Factors Influencing the Creep of Alloy Steels

(Continued from Page 16)

times the decrease in the room-temperature impact strength of the materials after service at these temperatures is also serious.

Method of Manufacture

Although two steels may have substantially the same chemical composition, the creep characteristics may differ according to the manufacturing methods employed. The factors of major importance are the melting practice and the deoxidation of the liquid steel. A distinction must be drawn between melting process and melting practice. The melting processes bring to mind the types of furnaces used in making steel, yet there are numerous ways in which the liquid steel can be handled in the furnace itself or in the ladle after tapping the furnace. Steelmaking should be considered as a matter of physical chemistry. Naturally, certain orthodox melting practices have become identified with the principal melting processes, but that does not prevent the use of several different methods of melting steel by any one process. The open-hearth and particularly the electric furnace process is quite flexible in this respect. While certain steels can be made in the electric furnace alone, it probably would not be exaggeration to say that steels can be made in the electric furnace to simulate the inherent character of the various open-hearth steels.

An outstanding example of the effect of melting practice and deoxidation upon the creep resistance of steels is found in the comparison of "killed" and "open" plain carbon open-hearth steel. Table 3 shows the results of creep strength determinations on unalloyed killed and open steel of the same carbon content at several temperatures. The killed steel has greater creep resistance at 900° F. and 1,000° F. There is only a small difference in the strength of the steels at 800° F., which is probably true for still lower temperatures.

The temperature range 900-1,000° F. represents the safe limit for plain carbon steel in high-temperature equipment intended for long service. The higher creep strength values of the killed steel at these temperatures compels a preference for the killed over the open steel.

Heat-Treatment

Heat-treatment is widely recognized as having an important effect on the creep of the pearlitic steels, especially in the temperature range up to 1,000-1,100° F. Many laboratories anneal all specimens ot be used in creep tests on the assumption that service conditions will ultimately reduce the constituents of the steel to the form in which they will be found after the material has been annealed. In work done at the University of Michigan, creep tests have been made on steels that have been normalized and tempered at 1,200° F. This treatment has been found to produce better creep resistance than is obtained for the same steels in either the annealed or the quenched and tempered condition, and the resulting structure is considered sufficiently stable for operating temperatures up to 1,000° F.

Lately there has been a question of whether annealing confers the greatest stability, especially for steels used at operating temperatures exceeding 1,000° F. In many steels the annealing treatment produces lamellar pearlite, although it has been found that during service the pearlite may be changed from the lamellar to the spheroidized condition, in which the carbides have assumed a globular shape. Some investigators have therefore wondered whether creep tests should be conducted on material in the annealed, the normalized and tempered, or the spheroidized condition. The advocates of the preliminary spheroidizing treatment maintain that all steels virtually become spheroidized in service at temperatures over 1,000° F., and for that reason should be studied in the spheroidized condition.

Data are given in Table 4 to show the influence of these various treatments

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on creep. The material was a killed-carbon steel containing 0.15 per cent carbon.

Heat-Treatment D

The heat-treatment designated 1,015D leaves the steel spheroidized; in the other three conditions of structure the carbon-rich grains consist of lamellar or sorbitic pearlite. The structures obtained are revealed in the photomicrographs of Figure 1. From the tabulated creep strengths it is apparent that the spheroidizing treatment produces the lowest creep resistance, although there is not much difference between the effect of the spheroidizing and the annealing treatment for the slower rates of creep. The normalizing and tempering treatment (short-time reheating) confers greater resistance to creep than the annealing treatment. The hot-rolled steel exhibits quite high creep strength, probably due to favorable carbide-particle size and dispersion, but the advantage can be regarded as only temporary for the structure is the most unstable of those examined.

The data also indicate there is a difference in the degree of stability of the steel in the spheroidized state, undoubtedly depending upon the agglomeration of the carbides. The normalized steel tempered one hour at 1,200° F. is similar to the spheroidized material except that the carbide particles are smaller. Protracted heating at the same temperature has resulted mainly in the increase of particle size until the condition has been reached that is described as a spheroidized structure. The redistribution and growth of the carbide particles in any structure is aided by the greater solubility and faster diffusion of the carbon at high temperatures. Obviously, the creep characteristics of a steel will vary as spheroidization proceeds, even during creep testing. For practical purposes steels are considered as being stabilized after a full-softening anneal.

Steels develop greatest room-temperature strength on quenching and tempering. Yet at temperatures of 1,000° F. or higher the quenched structure possesses the lowest creep strength. Tests conducted at 1,000° F. on a manganese-molybdenum steel in the quenched and tempered condition showed the lowest creep resistance, while specimens in the normalized and tempered condition gave the highest creep resistance. The creep strength of the annealed steel was between the other two. In commercial applications, it is not always permissible to supply steels that have been heat-treated to impart the maximum creep resistance. Thus the regular bolt steels for high-temperature work are oil quenched and tempered to meet definite specifications for mechanical properties at ordinary temperatures. However, the creep strength could be improved by the substitution of a normalizing and tempering treatment if concessions could be made in the strength at normal temperatures. Nevertheless high strength bolt steels continue to be used in current practice to guard against damage to the bolts in tightening joints. For similar reasons, alloy steel tubing for the construction of high-temperature apparatus is supplied in the annealed condition to provide good forming quality for the manipulation.

TABLE 2—CREEP CHARACTERISTICS OF MANGANESE-MOLYBDENUM STEELS AT 900° F. ALL STEELS NORMALIZED AND DRAWN AT 1,300° F.

Designation	Type composition C	Mn	Si	Mo	Stress for designated rate of creep: 1 per cent 100,000 hrs.	1 per cent 10,000 hrs.	1 per cent 1,000 hrs.
MM10	.13	1.10	.36	.20	10,200	17,250	29,000
MM9	.15	1.25	.19	.25	14,250	24,500	33,500
MM11	.13	1.46	.13	.32	10,300	17,000	28,000
MM8	.15	1.55	.15	.25	11,500	20,000	30,000
MM2	.15	2.06	.19	.21	8,600	14,000	20,000
MM4	.16	2.99	.23	.24	7,100	9,300	20,000

TABLE 3—CREEP CHARACTERISTICS OF KILLED AND OPEN PLAIN CARBON OPEN-HEARTH STEEL AT TEMPERATURES OF 800°, 900° AND 1,000° F.

Type	Temperature, deg. F.	Stress for designated rate of creep: 1 per cent 100,000 hrs.	1 per cent 10,000 hrs.	1 per cent 1,000 hrs.
Killed	800	12,000	18,000	25,000
Open	800	15,000	19,500	25,000
Killed	900	11,250	15,250	20,500
Open	900	5,400	8,000	11,500
Killed	1,000	3,200	6,500	14,500
Open	1,000	1,800	3,550	7,000

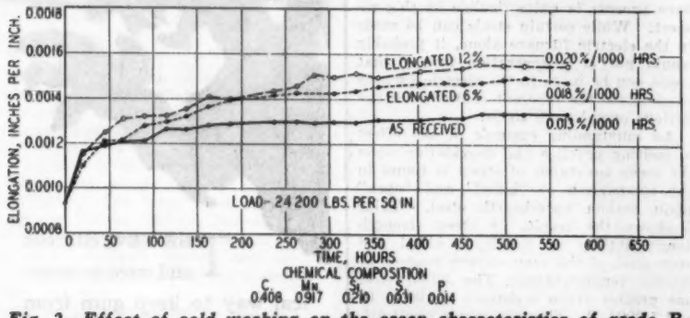

Fig. 2—Effect of cold working on the creep characteristics of grade B steel at 600° F

Grain Size

It is known that the size of the crystals comprising the structure of the steels influences the creep characteristics. There are two aspects of the effect of crystal size or "grain size" upon the behavior of steels. It is necessary to consider not only the actual grain size of the structure independent of the previous circumstances but also the "inherent grain size," which is established by means of a standardized carburizing treatment. What may be called the "structural grain size" refers to the size of crystals observed in the unconditioned examination of the structure, simply the grain size the structure happens to exhibit when the steel is examined. Inherent grain size is determined by heating samples of steel 8 hours at 1,700° F. in an active carburizing medium, cooling the samples slowly from the carburizing temperature, and counting the number of openings in the carbide network in 1 square inch of the case microstructure as viewed at 100 diameters magnification. A numerical classification of steels for inherent grain size is presented in A. S. T. M. Standard A-19-33.

By this system of rating steels for inherent grain size the numbers 1 to 5 are identified as coarse-grained, numbers 5 to 8 as fine-grained steels. "Inherent grain size" is a misnomer that cannot be displaced easily because the term is already in common use. The grain size numbers really measure the rate of grain growth of steels at 1,700° F. Each steel has only one rating for inherent grain size but may present a large number of structural grain size variations corresponding to the thermal history of the steel. The significance of the carburizing test for grain size depends entirely upon the fact that many physical properties of steel have been correlated with the grain size ratings.

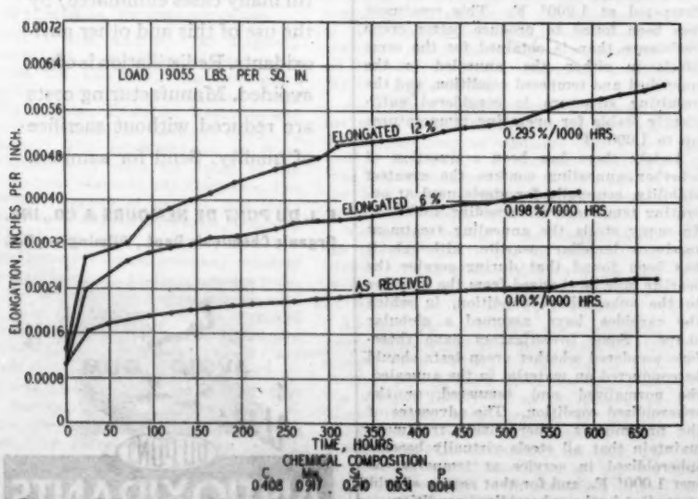

Fig. 3—Effect of cold working on the creep characteristics of grade B steel at 850° F

Structural Grain Size

Work has been done in the laboratories at the University of Michigan concerning the effect on the creep characteristics of variations in the structural grain size of heat treated non-ferrous alloys. The results indicate that at temperatures below the lowest temperature of recrystallization (equi-cohesive temperature) the fine-grained material possesses the better creep resistance, while at higher temperatures the coarse-grained structure has the greater resistance to creep. Steels are assumed to behave in the same manner. Studies in structural grain size cannot be conducted as easily on steels as on the non-ferrous alloys. It is difficult to observe the effect of changes in the grain size separate from the concurrent changes in the form of the carbides.

Inherent Grain Size

The inherent grain size definitely affects the creep strength of steels. In Table 5 are listed the results of an investigation of coarse and fine-grained carbon-molybdenum steel that contained 0.15 carbon, 0.49 manganese and 0.49 per cent molybdenum. The coarse-grained material had an A. S. T. M. grain size rating of 4 to 5, the fine-grained a rating of 8. Both steels had essentially the same composition and were tested in the annealed condition.

It was supposed that the coarse-grained steel would have a larger mean crystal size than the fine-grained steel after annealing and consequently smaller intergranular surface area along which creep movement could take place at temperatures above the equi-cohesive temperature. The higher creep strength of the coarse-grained steel except in the tests at 800° F. for the slower rates of creep sustains the correctness of this supposition. From the tests at 800° F. for a creep rate of 1 per cent per 1,000 hours, it may be inferred that metal flow at such a fast rate is not creep but represents a rate of extension corresponding to tensile testing with slowly applied load. The equi-cohesive temperature of the carbon-molybdenum steel apparently lies between 800 and 1,000° F.

Other compositions of coarse and fine-grained steels have been investigated for

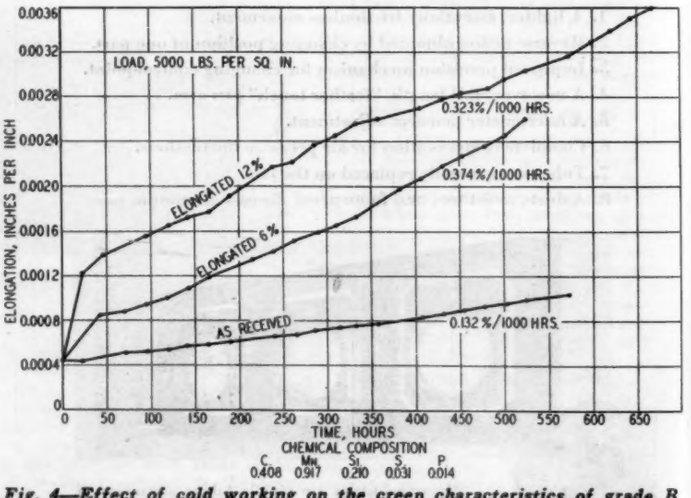

Fig. 4—Effect of cold working on the creep characteristics of grade B steel at 1000° F

which the creep test results are similar. The writers believe, however, the coarse-grained steels are not enough stronger than the fine-grained steels in the important range of industrial temperatures to urge a preference for coarse-grained steels. In some respects the fine-grained steels have advantages over the coarse-grained steels. They do not coarsen as rapidly at forging temperatures and are invariably tougher and more ductile at atmospheric temperature.

Temperature of Recrystallization

The belief has already been expressed that the lowest temperature of recrystallization after maximum strain-hardening coincides with what Jeffries and Archer called the equi-cohesive temperature. Little information is available on the lowest temperature of recrystallization of steels, but from work done on non-ferrous alloys it is known that the position of this temperature plays a part in creep. At temperatures below the recrystallization temperature materials can withstand large stress without creep, while above this temperature even small stress will cause creep. The position of the lowest

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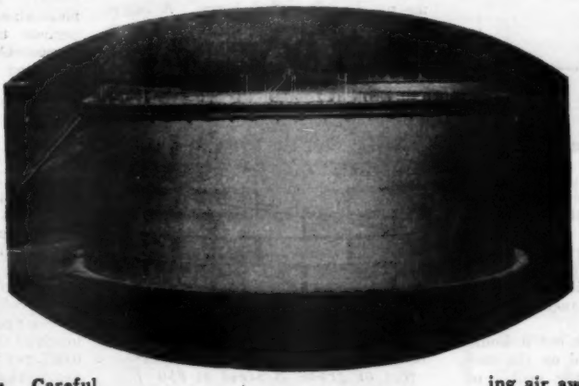
Pipe Line Terminal Illustrates Variety of Storage Requirements

THE northern terminal of the Phillips Pipe Line at East St. Louis, Illinois, pictured here, presented a typical problem in evaporation engineering. As originally built three years ago, it included 25 storage units, divided into 5 groups to meet the various conditions of service and product. More units have since been added.

This pipe line, extending 681 miles, from Borger, Texas, to East St. Louis, handles natural gasolines, butane, and refinery gasolines. Its daily capacity is 24,000 bbls. Careful operation and dispatching permits shipping all these products through a single line without serious mixing. In addition to avoiding the necessity for duplicate lines, this discourages theft in transit because the products as shipped are not satisfactory motor fuel.

The tanks at East St. Louis and at the other stations along the line, provide facilities both for storage and for blending to form marketable products. In the original tankage at the East St. Louis terminal, about 75% of the total capacity was provided in eight 80,000 bbl. tanks designed for gasolines with vapor pressures not exceeding 12 lbs. per square inch at 100° F. These tanks were all equipped with Wiggins Floating Roofs to stop evaporation.

For blending, two 20,000 bbl. tanks were provided and for bulk loading five 10,000 bbl. tanks. All of these have Wiggins Floating Roofs.



For storing grade AA natural gasolines, the Hortonspheroid was selected because of its adaptation to the internal pressure required to stop evaporation from such a product. Four 20,000 bbl. units designed to operate at 15 lbs. per sq. in. were installed. Six 7500 bbl. butane tanks were also provided, built to withstand an internal pressure of 50 lbs. per sq. in. to stop evaporation loss in this liquid.

Character and Amount of Saving

As an example of the economy possible through the proper application of evaporation stopping equipment, consider the group of 80,000 bbl. storage tanks in this terminal. Assume that the eight tanks have averaged half full with six fillings a year and an average storage period of two months.

Based on tests of big oil companies with similar roofs, it is fair to estimate that with "gas-tight" roofs these tanks would lose through evaporation 0.1% for each filling and 0.5% for each period of two months storage. In a year, therefore, the loss would be 3.6% on the assumed half capacity of each tank.

Wiggins Floating Roofs, on the other hand, have proved their ability to stop most of this loss by riding directly on the surface of the liquid at all times and thereby keeping air away from the oil. The tests referred to show no loss in filling and only 0.05% for a two months storage period. In a year, therefore, the total loss with Wiggins Roofs would be only 0.3%, or a net annual saving as compared to "gas-tight" roofs of 3.3%, or 1320 bbls. per tank. Obviously this saving pays for the additional cost of the Floating Roof in a short time and from then on returns a big annual profit on the investment.

Let Us Estimate Your Saving

Each case of evaporation engineering involves different factors. Our experience in this specialized field enables us to bring to you data pertinent to almost any condition. Let us give you an estimate of savings possible under your own conditions and submit quotations on any equipment you may be considering.

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TULSA	1606 Thompson Bldg.	CLEVELAND	2204 Rockefeller Bldg.	SAN FRANCISCO	1064 Rialto Bldg.
BIRMINGHAM	1536 Fiftieth St., N.	NEW YORK	3347-165 Broadway Bldg.	LOS ANGELES	1423 Wm. Fox Bldg.

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temperature of recrystallization may also change the slope of the curves produced when stress values are plotted against rates of creep on logarithmic coordinates. The slope of the curves increases for temepratures above the lowest temperature of recrystallization.

Cold-Working

Tests have been conducted, on the same steel unstrained and after cold-working, to determine the effect of cold-work on creep at high temperatures. The steel selected for the purpose conformed with the Grade B chemical requirements of the A. S. T. M. tentative specifications for lap-welded and seamless steel pipe for for high temperature service, designation A-106-33T. Creep of the material was investigated at 600, 850 and 1,000/ F. by testing specimens of the hot-rolled steel unstrained and after cold-extension 6 and 12 per cent. The data are shown graphically in Figures 2, 3 and 4.

At all three temperatures the hot-rolled material had the highest creep resistance. The difference between the hot-rolled and cold-worked specimens was slight at 600° F. and became larger at 850 and 1,000° F. Hardness readings taken before and after the creep tests indicated the hardness of the specimens had not changed appreciably. X-ray examination, however, showed the rot-rolled material had undergone no change, whereas the cold-worked specimens exhibited lattice distortion. The lattice changes were slight at 600° F. in all the cold-worked specimens and at 850° F. in the specimens deformed 6 per cent. In the other cases the changes were pronounced. It may be that in the cold plastic deformation of the crystals atomic bonds are ruptured thereby facilitating creep movement at higher temperatures. After the cold-worked steel has been recrystallized by proper annealing the normal creep characteristics of the steel are restored.

TABLE 4—INFLUENCE OF HEAT-TREATMENT ON THE CREEP CHARACTERISTICS OF S.A.E. 1,015 STEEL AT 1,000° F.

Symbol	Heat treatment—	Stress for designated rate of creep: 1 per cent 100,000 hrs.	1 per cent 10,000 hrs.	1 per cent 1,000 hrs.
1,015A	Hot-rolled	7,000	12,800	15,800
1,015B	N. 1,725, T. 1,200° F. (1 hr.)	4,900	9,900	12,100
1,015C	Ann. 1,550° F.	3,000	6,200	12,900
1,015D	N. 1,725, T. 1,200° F. (168 hrs.)	2,750	5,800	8,200

TABLE 5—CREEP STRENGTH OF COARSE AND FINE-GRAINED CARBON-MOLYBDENUM

Inherent grain size—	Temperature, deg. F.	Stress for designated rate of creep: 1 per cent 100,000 hrs.	1 per cent 10,000 hrs.	1 per cent 1,000 hrs.
Coarse	800	15,500	26,000	44,500
Fine	800	21,500	37,000	54,000
Coarse	1,000	10,700	17,800	29,200
Fine	1,000	9,600	15,800	26,000
Coarse	1,200	480	2,000	4,050
Fine	1,200	260	1,400	2,400

Testing Procedure

The A. S. T. M.-A. S. M. E. Joint High Temperature Committee has proposed a Tentative Procedure for the creep testing of metallic materials, designated E ()-33T. While the adoption of this code will reduce the discrepancies in creep test results due to testing procedure, there are a few variables that should be considered in detail to illustrate how creep is influenced by the manner in which tests are made. Modification of the Tenative Procedure may sometimes be desirable to duplicate service conditions. One large manufacturer of equipment for high temperature service, for instance, believes that results of the down-step method of loading are the most valuable for the majority of his applications. The features of testing that will be described are: Location of thermocouple for the test specimen, sensitivity of extensometer, method of loading, and intermittent heating and loading.

Location of Thermocouple

Regardless of the type of furnace used for maintaining the creep specimen at the desired temperature and the length of time the specimen is held at temperature before the test is started, small temperature gradients exist in the specimen. The temperature of the test and thus the creep observed at a nominal temperature therefore vary with the location of the thermocouple.

Two methods of attaching the thermocouple to the specimen are now in common use. In one method, the thermocouple is attached to the outside of the specimen at the center of the gauge section and is shielded from direct radiation by an asbestos covering. In the other, the thermocouple is inserted in the specimen through a hole drilled along the longitudinal axis or is peaned into the shoulder of the specimen.

Both methods have merits, but it would seem that the couple placed on the surface of the specimen at the center of the gauge section would give temperature readings comparing more closely with those read in commercial practices. As the main purpose of obtaining creep data is to furnish engineers proper limiting unit stresses for safe high-temperature designs, it is believed that the method should correspond as nearly as possible to the commercial practice.

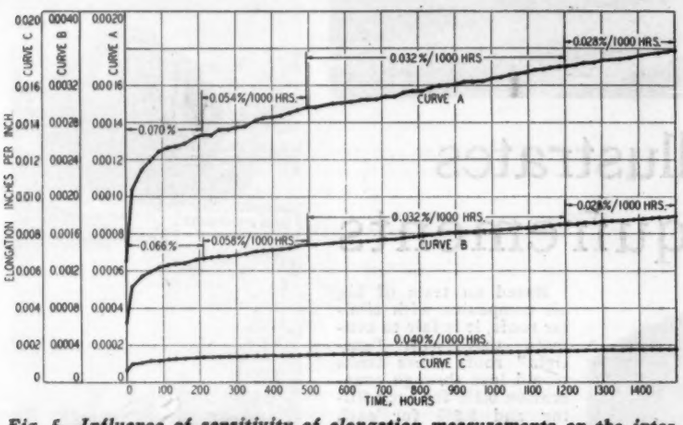


Fig. 5—Influence of sensitivity of elongation measurements on the interpretation of time-elongation curves

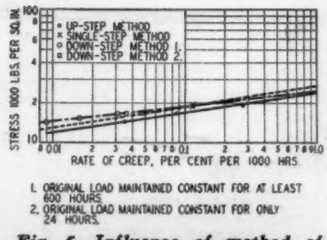
Sensitivity of Extensometer

A curve recording the relationship of the elongation of a creep specimen and time elapsed in the test must be interpreted in terms of the sensitivity of the apparauts for measuring the elongation. The rate of creep reported and hence the creep strength for definite rates of creep will depend upon the degree of sensitivity of the extensometer. This is particularly true for temperatures at which the rate of creep continues to decrease on protracted heating, as when the rate of strain-hardening exceeds the rate of recrystallization or self-annealing.

Figure 5 illustrates the point. Steel furnished according to A. S. T. M. Specification A-106-33T Grade B was tested at 850° F. under a stress of 16,795 pounds per square inch. Curve A is plotted to elongation in hundred-thousandths of an inch with estimation to millionths of an inch, Curve B to one-half the scale used for Curve A, and Curve C to elongation in ten-thousandths of an inch with estimation to hundred-thousandths of an inch. On the basis of Curve C the conclusion would be reached that flow was taking place at the uniform rate of 0.040 per cent per 1,000 hours after the first 250 hours of the test, whereas on the basis of Curves A and B, plotted from data taken simultaneously, the rate of creep is seen to decrease continuously as the time of test is prolonged. In Curves A and B the rate of creep during the last 300 hours of the test is less than half the creep rate for the earlier stages of creep. It thus appears that greater sensitivity of apparatus for measuring elongation does not necessarily increase the observed rate of creep.

Method of Loading

The most common ways of applying load in the creep test are known as the single-step, up-step and down-step methods. The A. S. T. M. tentative procedure calls for the single-step method in which a separate specimen is tested for each stress. In the up-step method a single specimen is first subjected to a small stress until the rate of creep remains constant for an arbitrary period of time not less than 200 hours. A larger stress is then applied. This procedure is repeated several times to provide the data for plotting a curve showing the relation of stress and rate of creep. The down-step method is the reverse of the up-step method; the large stress is applied first and the rates of creep are observed as the load is reduced. There are two variations of the down-step method. In the first, the large initial stress is maintained for a length of time sufficient to determine the rate of creep; in the second, the initial stress is applied for a brief period and then reduced.


STRESS, 1000 LBS. PER SQ. IN.
RATE OF CREEP, PER CENT PER 1000 HRS.
UP-STEP METHOD
SINGLE-STEP METHOD
DOWN-STEP METHOD 1
DOWN-STEP METHOD 2

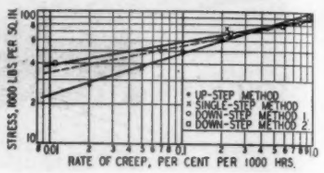
1. ORIGINAL LOAD MAINTAINED CONSTANT FOR AT LEAST 600 HOURS.
2. ORIGINAL LOAD MAINTAINED CONSTANT FOR ONLY 24 HOURS.

Fig. 6—Influence of method of loading on the creep characteristics of grade B steel at 850° F

Typical results of the three methods of loading for a carbon steel at 850 and 1,000° F. are shown in Figures 6 and 7. The up-step method tends to give low creep strength values, the down-step method high values; the results of the single-step method are usually intermdiate. Creep can be considered a differential effect of the high-temperature strain-hardening and self-annealing of the steel under stress. In the up-step method of loading the amount of strain-hardening is the minimum; the balance of strain-hardening and self-annealing will then favor rapid creep for a fixed stress. In the down-step method of loading the strain-hardening more than counterbalances the self-annealing so that creep diminishes owing to the increased loading capacity of the steel. The single-step method of loading is evidently a compromise between the other two.

Intermittent Heating and Loading

In commercial applications of high-temperature steels, parts are seldom held continuously at the operating temperature; periodic shutdowns are usually necessary. Sometimes the steel may be maintained at high temperature for long periods under changing or interrupted stress. Consequently, the creep of steels subjected to irregular heating and loading is of interest.

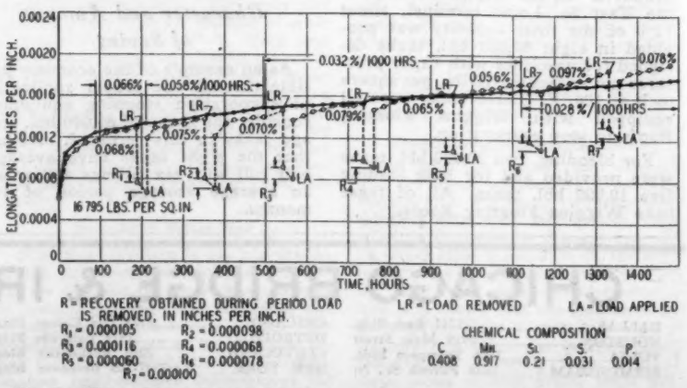

STRESS, 1000 LBS. PER SQ. IN.
RATE OF CREEP, PER CENT PER 1000 HRS.
UP-STEP METHOD
SINGLE-STEP METHOD
DOWN-STEP METHOD 1
DOWN-STEP METHOD 2

1. ORIGINAL LOAD MAINTAINED CONSTANT FOR AT LEAST 600 HOURS.
2. ORIGINAL LOAD MAINTAINED CONSTANT FOR ONLY 24 HOURS.

Fig. 7—Influence of method of loading on the creep characteristics of grade B steel at 1000° F

Figure 8 shows the results of an experiment to determine the effect of intermitten loading on creep. A plain carbon steel was tested at 850° F. under a stress of 16,795 pounds per square inch. With continuous loading the rate of creep was 0.066 per cent per 1,000 hours by the time the test had run 200 hours; the rate of creep then decreased gradually unitl it fell to 0.032 per cent per 1,000 hours. With intermittent loading the so-called first stage of creep was observed upon each repeated application of load and the rate of creep ranged 0.956 to 0.097 per cent per 1,000 hours, which is nearly the same as in the initial stage of the test run with continuous loading. Because the rate of creep for continuous loading decreases and for intermittent loading increases with time, the plastic deformation due to the intermittent loading will be the greater. In similar tests at 1,000° F., intermittent loading did not affect the creep appreciably.

Intermittent heating alone, and intermittent heating in conjunction with intermittent loading had no significant effect on the normal creep of ths steel at 850 or 1,000° F.



R = RECOVERY OBTAINED DURING PERIOD LOAD IS REMOVED, IN INCHES PER INCH.

R_1 = 0.000105 R_2 = 0.000098
R_3 = 0.000116 R_4 = 0.000068
R_5 = 0.000060 R_6 = 0.000078
R_7 = 0.000100

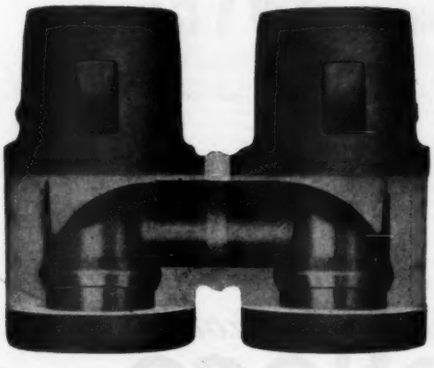
CHEMICAL COMPOSITION

C	Mn	Si	S	P
0.408	0.917	0.21	0.031	0.014

Fig 8—Time-elongation curves for grade B steel at 850° F intermittent loading

FORGED Return Headers . .

Group of header forgings before machining.



A Kellogg "Smooth-Flow" header sectioned to expose the flow line, the walls of the cross-over section and the deflector plugs.

. . of Plain or Alloy Steels

Kellogg "Smooth-Flow" return headers can be furnished in regular carbon steel or various chrome bearing steels to cover practically all header requirements of the oil industry.

As the body is composed entirely of forged material the header possesses the soundness, toughness and reliability commonly found in a forging.

Inquiries should include data regarding furnace tube diameter, operating pressure and temperature, center to center dimensions of tubes and the material preferred.

KELLOGG

THE M. W. KELLOGG COMPANY · 225 BROADWAY, NEW YORK

Chicago, 1 La Salle St · San Francisco, 200 Bush St · Tulsa, Philtower Building
Birmingham, 827 Brown-Marx Building · Los Angeles, 1031 South Broadway

Pressure vessels "Masterweld" for the Power, Refinery and Chemical Industries. Power Plant and Industrial piping. Heat Exchangers. Radial Brick Chimneys, Plastic Refractories. Cross, Holmes-Manley, de Florez and Tube and Tank cracking units, absorption plants and pipe stills. Pacific Hot Oil Pumps—de Florez Temperature Control.

This Great New Motor Oil
IS THE CLIMAX OF CONTINENTAL'S 59 YEARS OF QUALITY LEADERSHIP!
CONOCO
GERM PROCESSED
PARAFFIN BASE
MOTOR OIL
Its Superiority has been proved in laboratory tests, in road tests, and in the famous Indianapolis Destruction Test
FOR 59 years, products of the Continental Oil Company have been famous for dependable quality. Now, with 18,000 Conoco Stations in 40 states, Continental climaxes half a century of quality leadership with New and Improved Conoco Germ Processed Motor Oil!
It is not "just another new oil". It is entirely different from every other oil—made by a new, patented process.
Continental research scientists spent over two years developing New and Improved Conoco Germ Processed Motor Oil. Thousands of experiments and tests were made in Continental laboratories. Hundreds of Continental cars and trucks were driven 965,000 miles in road tests.
Here are the outstanding characteristics of this remarkable new oil:
Twenty-four times the film strength of any straight mineral oil.
Penetrates and combines with metal surfaces—providing the "Hidden Quart that Never Drains Away".
Stability under all conditions and will not thin out.
Prevents carbon and sludge trouble.
Unquestionable proof that this new oil gives greater motor protection and lower oil consumption was provided in a Destruction Test against five nationally-known oils at the Indianapolis Motor Speedway under AAA Contest Board supervision (Sanction No. 3001).
Six new, identical stock cars—each filled with five quarts of oil assigned to it by lot, with no more oil added, were driven at the rate of 90 miles per hour until the motors were destroyed. New and Improved Conoco Germ Processed Motor Oil carried its car 4,729 miles—3,015.8 miles farther than the first oil to fail and 1,410.2 miles farther than the best of the five other oils.
Drive into a Conoco Red Triangle Station today in any car, new or old, for a trip anywhere, any distance. Fill with New and Improved Conoco Germ Processed Motor Oil. Drive out with the peace of mind that comes from knowing your motor has the finest protection you can give it!
GREATER MOTOR PROTECTION ··· LOWER OIL CONSUMPTION!
New and Improved
CONOCO
GERM PROCESSED
(PARAFFIN BASE)
MOTOR OIL
CONTINENTAL OIL COMPANY PRESENTS
EVERY WEDNESDAY NIGHT
OVER N. B. C.
HARRY RICHMAN, singing star of stage and screen ... JACK DENNY AND HIS MUSIC, famed orchestra ... JOHN B. KENNEDY, famous commentator. See radio page for time of broadcast.
N.B.C.

This is one of the advertisements in the Conoco third quarter campaign. 1300 newspapers! 10,000,000 circulation! In 40 states! Our total sales of this superior oil have increased nearly 100% over last year! Individual stations and dealers have had increases of *several hundred* per cent! Let us tell you our whole story.

CONTINENTAL OIL COMPANY

ALBUQUERQUE, N. M. · BUTTE, MONTANA · CHICAGO, ILLINOIS · DENVER, COLORADO · FORT WORTH, TEXAS · GREAT FALLS, MONT. · KANSAS CITY, MO. · LINCOLN, NEBRASKA · NEW YORK, N. Y. · PONCA CITY, OKLA. · RICHMOND, VA. · SALT LAKE CITY, UTAH

Chicago Refined Oil Market Unsettled Partly Due to Drought and Cut Prices

By SPECIAL CORRESPONDENT

CHICAGO, Aug. 6.—Although the refinery gasoline market here theoretically has held firm and little changed for some time, the general situation is irregular and unsettled, with trade sentiment persisting along uncertain and mixed lines. Actual ruling prices are about the same as they have been for the last few weeks, with low bracket motor gasoline mostly ruling slightly below 4 cents a gallon.

A great deal of pessimism has been abroad in the Middle West oil market centers in the last two weeks—perhaps more than is justified by the actual facts. A part of this has been engendered by the drought, a part by the badly cut local gasoline markets in many regions and a part by fears over refinery and crude market prospects. In so far as the drought is concerned, it is not a matter of the past. Precipitation is still running much below normal in the Middle West, although extremely adverse crop conditions are confined to certain areas. Long continued withering heat throughout the central states has had a bad effect on morale both among the public and in the oil trade. Over wide sections rainfall for the last six months has been only 40 to 50 per cent of normal. Still, it is likely that late rains would effect a reverse that would be extensive in their effects on both physiology and crops.

Price Cuts Severe

Price cuts are still severe in the Middle West, and are taking the edge off the fact that volume of consumption is running at good levels in most sections. Profits of both majors and independents are of course being vitally affected by these conditions. So far as can be learned, only preliminary action has been taken as yet along the lines of the settlement of price wars by the Planning and Coordination Committee at least so far as the central states area is concerned.

The internal and statistical situation in the industry of course is open to wide variation of opinion, and sentiment now is mostly rather doubtful on this point. Numerous representations have been made to authorities by various trade groups in the last few weeks that production and refining activities should be scaled down immediately to prevent serious trouble in oil markets.

Kerosene

Kerosene movement is understood to be fair, and prices are firm. Statistical reports are interpreted as being rather favorable to a firm market in this product. Offerings are not large and appear to be well absorbed. Some are predicting higher kerosene prices.

Jobber Buying Still Slow

Actual buying of gasoline by jobbers in the tank car market in the last few days has continued slack and limited. Jobbers have little material in storage, but they do not wish to speculate. They are ordering out considerable contract material, however. Car lot marketers have been offering gasoline in irregular and spotty fashion, and it is difficult to determine just how much material is involved in such offerings. Refiners do not seem to be offering much gasoline direct to the trade, but the amount available does seem sufficient to keep the general aspect of the market rather uncertain.

Natural gasoline firmness is aiding in keeping the gasoline structure from falling back, it appears. Amount being blended by the trade currently is reported quite limited.

Heating Oils

Distillates now are firmer than recently, and are not so freely offered, whether from East Texas or elsewhere. The distributors of heating oils are gradually putting material into storage for fall and

(Continued on Page 78)

Crude Oil Prices

(Continued from Page 27)

Effective September 29 in Salt Flat by Shell Petroleum Corp.

Rocky Mountain States

Iles, light (Sept. 29, 1933)	$.96
Iles, heavy (Sept. 29, 1933)	.90
Florence, Colo. (June 17, 1933)	.30
Fort Collins and Wellington, Colo. (June 17)	(See Salt Creek prices)
Big Muddy (Sept. 29, 1933)	1.01
Frannie, light (May 1, 1934)	.70
Frannie, heavy (Sept. 29, 1933)	.62
Salt Creek and LaBarge (Sept. 8, 1933)	See Stanolind Mid-Continent price schedule
Grass Creek, light (Sept. 29, 1933)	1.16
Grass Creek, heavy (Dec. 16, 1932)	.45
Elk Basin (Sept. 29, 1933)	1.18
Rock Creek (Sept. 29, 1933)	1.02
Dutton Creek (July 8, 1933)	See Mid-Continent gravity prices
Lance Creek (Dec. 16, 1932)	.92
Poison Spider (Mar. 5, 1931)	.70
Hudson (June 2, 1931)	.65
Lander (Mar. 5, 1931)	.40
Rex Lake (Feb. 22, 1930)	1.10
Osage	1.08
Lost Soldier (Sept. 30, 1933)	.88
Hamilton Dome:	
Below 18° (July 1, 1934)	.52
18° and above (July 1, 1934)	.62
Torchlight (Sept. 29, 1933)	1.18
Greybull (Sept. 29, 1933)	1.18
Pondera	1.16
Sunburst (Sept. 29, 1933)	1.35
Cat Creek, Montana	1.07
Hogback (Sept. 29, 1933)	1.11
Lea County, N Mex. (Sept. 29, 1933)	.75
Maljamar (Sept. 29, 1933)	.70
Artesia-Jackson (Dec. 1, 1933)*	.75

Note—Salt Creek, Torchlight, Elk Basin, Grass Creek, Frannie, Greybull, Hogback and Iles by Stanolind Oil & Gas Co. Elk Basin, Grass Creek light, Big Muddy, Rock Creek and Sunburst by Ohio Oil Co. Lost Soldier posted by Producers & Refiners Corp. Artesia, Jackson and Maljamar posted by Continental Oil Co. Lea County, effective September 29, 1933, by Humble Oil & Refining Co. and other buyers; Fort Collins, Wellington, Orchard, Florence, Big Muddy, Cat Creek, Rattlesnake and Table Mesa by Continental Oil Co. Osage posted by Arro. Hamilton Dome, Wyo., by Stanolind Oil & Gas Co.

*Continental Oil Co.

North Louisiana and Arkansas

Smackover, Ark. (all grades)	$.70
Tullos-Urania, La. (Jan. 13, 1934)	.87
Nevada, Ark. (Sept. 29, 1933)	.60
East El Dorado (Sept. 29, 1933)	.70
Converse, La. (Mar. 17, 1934)	1.03
Elm Grove, La. (Sept. 29, 1933)	.70
Holly, La. (Mar. 17, 1934)	1.03
Pleasant Hill, La. (Mar. 17, 1934)	1.03
Zwolle, La. (Mar. 17, 1934)	1.03
Champagnolle, Ark. (Mar. 17, 1934)	.81
Lisbon, Ark. (Mar. 17, 1934)	1.03
Stephens, Ark. Sept. 29, 1933)	.70
Urbana, Ark. (Mar. 17, 1934)	.80
Other fields	(See gravity table)

Note—Smackover: Effective September 29, 1933, Texas Co., Magnolia Petroleum Co., Standard of Louisiana, Louisiana Oil Refining Corp., Gulf Refining Co. and Phillips Petroleum Co. East El Dorado posted by Magnolia Petroleum Co. and Gulf Refining Co., Nevada by Standard Oil Co. of Louisiana. Urania posted by H. L. Hunt, Inc., and Louisiana Oil Refining Co. Converse, Holly, Zwolle and Urbana by Standard Oil Co. of Louisiana; Elm Grove by Simmons Oil & Refining Co.; Pleasant Hill by Standard Oil Co. and Magnolia Petroleum Co; Champagnolle by Standard Oil Co. and Lion Oil & Refining Co.

Eastern States

TIDE WATER PIPE CO.
(Effective May 1, 1934)

Bradford, Pa.	$2.54
Allegany, N. Y.	2.54

SOUTH PENN OIL CO.
(Effective May 1, 1934)

Pennsylvania Grade Oil in National Transit Lines (Bradford Field)	$2.54
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	2.39
Pennsylvania Grade Oil in Eureka Pipe Line lines	2.17
Pennsylvania Grade Oil in Buckeye Pipe Line lines	2.07
Corning Grade Oil in Buckeye Pipe Line Co.'s lines (Oct. 2, 1933)	1.93

PENNZOIL CO.
(Effective May 1, 1934)

Pennsylvania Grade Oil in National Transit Lines:	
Group A (Includes Cochran, Franklin, Hamilton and Doolittle districts.)	$2.47
Group B (Includes Titusville district.)	2.46
Group C (Includes Turkey and Tidioute districts.)	2.46
Group D (Includes Bear Creek and Porkey districts.)	2.44
Group E (Includes Eldeneau, Bull Creek, Rough Run, Carbon, Dipner, Bredin, McJunkin, Jameson Kennerdell, Emlenton, Tions, Lacey and Kinsua districts. Price depends on length of pipe line haul to plant at Oil City.	2.43

PURE OIL CO.
(Effective May 1, 1934)

Cabin Creek, W. Va.	$2.17
Bradford Hollow, W. Va.	2.17
Kelly Creek, W. Va.	2.17

Middle Western States

OHIO OIL CO.
(Effective September 29, 1933)

Lima	$1.30
Illinois (Jan. 5, 1934)	1.13
Princeton, Ind. (Jan. 5, 1934)	1.13
Plymouth	Shut in
Western Kentucky (May 26, 1934)	$1.08
Midland, Mich. (Sept. 30, 1933)*	1.03
Oceana, Mich. (Oct. 5, 1933)	.90
Somerset, Ky. (Sept. 30, 1933)	1.33
Hart County, Ky. (Oct. 1, 1933)	1.13

*Posted by Pure Oil Co. Producers Pipe Line Co. pays 5 cents per barrel over Pure Oil Co.'s posted price. Somerset, Ky., crude purchased by Ashland Refining Co., Ashland, Ky., and posted price includes premium. Hart County, Kentucky, crude purchased by Stoll Refining Co. Oceana posted by Old Dutch Refining Co. and Naph-Sol Refining Co.

Canada

Ontario (September 9, 1933):	
Petrolia*	$2.10
Oil Springs	2.17
Turner Valley (May 21, 1934):†	
Clear Naphtha	$2.55
Discolored naphtha	2.37
Crude oil, 50 gravity	2.19
Crude oil, 45 to 49.9	2.07
Crude oil, 40 to 44.9	1.56

*Imperial Oil, Ltd. †Imperial Oil, Ltd., and Regal Oil & Refining Co.

Mexico

Panuco*	$0.94

*F.o.b. ship, based on May transactions and exclusive of production and export taxes and bar dues.

California Crude Oil Prices

STANDARD OIL CO. OF CALIFORNIA
(Effective September 6, 1933)

For current purchases of crude oil at the well (unless otherwise specified.) (All gravities above those quoted take highest price offered in that field.)

Gravity—	Long Beach	Seal Beach, Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda, Brea Canyon	Athens-Rosecrans	Torrance	Richfield	Whittier, La Habra	Montebello	Santa Fe Springs	La Habra-Coyote	Midway-Sunset, Elk Hills, Buena Vista Hills	Lost Hills	Coalinga	Coyote
14-14.9	$.65	$.65	$.65	$.65	$.65	$.65	....	$.65	$.65	$.65	$.65	....	$.65	$.57	$.57	$.57	$.65
15-15.9	.65	.65	.69	.69	.66	.69	....	.66	.65	.65	.65	....	.65	....	....	....	.65
16-16.9	.66	.66	.72	.72	.69	.72	....	.69	.67	.68	.65	....	.68	....	....	....	.65
17-17.9	.69	.68	.75	.76	.73	.76	....	.72	.70	.71	.65	....	.68	....	....	....	.68
18-18.9	.72	.68	.78	.80	.76	.79	....	.75	.74	.74	.65	....	.71	.61	.61	.59	.71
19-19.9	.75	.68	.81	.83	.80	.82	....	.78	.78	.78	.65	....	.74	.64	.65	.62	.74
20-20.9	.78	.68	.83	.87	.83	.85	....	.81	.82	.81	.66	....	.78	.67	.69	.65	.78
21-21.9	.81	.72	.86	.90	.87	.88	....	.83	.86	.84	.69	$.72	.81	.70	.72	.68	.81
22-22.9	.84	.76	.89	.94	.90	.92	....	.85	.89	.87	.72	.76	.84	.73	.76	.72	.84
23-23.9	.88	.81	.92	.97	.94	.95	$.82	.89	.92	.90	.76	.79	.87	.77	.79	.76	.87
24-24.9	.91	.85	.95	1.01	.97	.98	.86	.92	.97	.93	.80	.83	.90	.81	.82	.78	.90
25-25.9	.94	.89	.98	....	1.00	1.01	.90	.95	1.00	....	.85	.87	.93	.85	.85	.81	.93
26-26.9	.97	.93	1.01	....	1.04	1.04	.94	.98	1.04	....	.89	.90	.96	.89	.88	....	.96
27-27.9	1.00	.98	1.04	....	....	1.07	.97	....	1.08	....	....	.94	.99	.93	.91	....	.99
28-28.9	1.03	1.02	1.07	....	....	1.10	1.01	....	1.11	....	....	.98	1.02	.97	.94	....	1.02
29-29.9	1.06	1.06	1.09	....	....	....	1.04	....	1.15	....	....	1.01	1.05	1.01	.97	....	1.06
30-30.9	1.09	1.10	1.12	....	....	....	1.08	....	....	....	....	1.05	1.09	1.05	1.00	....	1.09
31-31.9	....	....	....	....	....	....	1.12	....	....	....	....	1.08	1.12	1.09	....	....	1.12
32-32.9	....	....	....	....	....	....	1.16	....	....	....	....	1.12	1.15	1.13	....	....	1.15
33-33.9	....	....	....	....	....	....	....	....	....	....	....	1.16	1.18	1.17	....	....	1.18
34-34.9	....	....	....	....	....	....	....	....	....	....	....	1.19	1.21	....	....	....	1.21
35-35.9	....	....	....	....	....	....	....	....	....	....	....	1.23	....	....	....	....	....
36-36.9	....	....	....	....	....	....	....	....	....	....	....	1.26	....	....	....	....	....
37-37.9	....	....	....	....	....	....	....	....	....	....	....	1.30	....	....	....	....	....
38-38.9	....	....	....	....	....	....	....	....	....	....	....	1.34	....	....	....	....	....

Additional Standard Oil Quotations

Mountain View—Effective July 3, 1934, the following are the prices of the Standard Oil Co. of California for its current purchases of crude oil at the well in the Mountain View Field: 14 to 15.9 degrees, 57 cents; 20-20.9, 58 cents; 21-21.9, 59 cents; 22-22.9, 61 cents; 23-23.9, 63 cents; 24-24.9, 66 cents; 25-25.9, 69 cents; 26-26.9, 72 cents; 27-27.9, 75 cents; 28-28.9, 78 cents; 29-29.9, 81 cents; 30-30.9, 84 cents; 31-31.9, 87 cents; 32-32.9, 90 cents; 33 degrees and above, 93 cents.

Elwood Terrace—F.o.b. ship, 33 degrees, $1.03; 34 degrees, $1.06; 35-35.9, $1.09; 36-36.9, $1.12; 37 degrees and over, $1.15.

Newhall—14 degrees and over, 57 cents.

McKittrick and Kern River—14 degrees and over, 57 cents.

Wheeler Ridge—14 to 17.9 degrees, 57 cents; 18-18.9, 58 cents; 19-19.9, 61 cents; 20-20.9, 64 cents; 21-21.9, 67 cents; 22-22.9, 70 cents; 23-23.9, 73 cents; 24-24.9, 76 cents; 25 degrees and over, 79 cents.

Kettleman Hills—33-33.9 degrees, 93 cents; 34-34.9, 96 cents; 35-35.9, 99 cents; 36-36.9, $1.02; 37-37.9, $1.05; 38-38.9, $1.08; 39 degrees and over, $1.11.

The Texas Co. posted in Shiells Canyon, South Mountain and Santa Paula as follows: 14 to 17.9, 57 cents; 3 cents added for each degree up to and including 26-26.9 degrees at 84 cents; then 4 cents added for each degree up to and including 30 degrees and over at $1. Company posts Standard Oil Co.'s Montebello prices in Montebello and North Whittier, and posts Standard Oil Co. prices in Signal Hill, Alamitos Heights, Huntington Beach, Torrance, Richfield and Santa Fe Springs, all effective September 6.

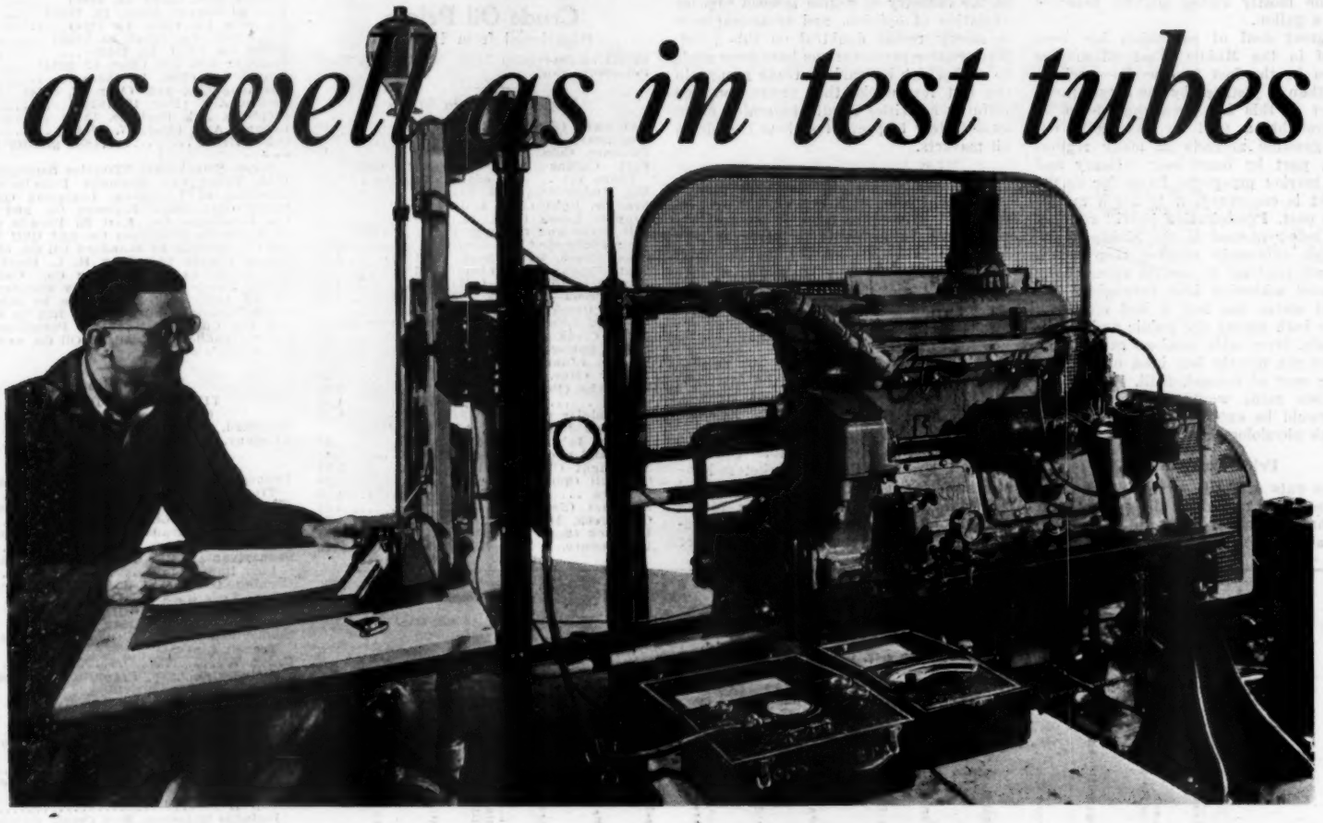
General Petroleum Co. posts Standard Oil Co. prices in Athens, Rosecrans and Signal Hill; Alamitos Heights up to 26-26.9; Santa Fe Springs up to 35-35.9; Richfield up to 35-35.9; Brea Canyon and Olinda up to 35-35.9, and Torrance up to 35-35.9.

Union Oil Co., effective September 6, posts same price as Standard Oil Co. in all fields in which both purchase, excepting that in Athens-Rosecrans, Union Oil Co. posts 31-31.9, 72 cents, and 32-32.9, $1.19; 34-34.9, $1.31, and 35-35.9, $1.34.

Associated Oil Co., effective September 6, posted same prices for the same grades as Standard Oil Co. of California, excepting that in some fields its gravity scale stops as follows: Huntington Beach, 26 degrees and over; Seal Beach and Alamitos Heights, 26 degrees and over; Coyote Hills, 22 degrees and over; Richfield, 25 degrees and over; Torrance, 25 degrees and over; Inglewood, 24 degrees and over; Santa Fe Springs, 35 degrees and over; Midway-Sunset, Elk Hills, Buena Vista Hills, 30 degrees and over. Also Associated pays 52 cents for oil of 11 to 13.9 gravity in McKittrick, Kern Front, Kern River, Midway-Sunset, Elk Hills, Buena Vista Hills and Coalinga.

Tested for Motors in Motors

as well as in test tubes



SLUDGE!—that dark lumpy mass insoluble in oil . . . that separates from oil. It can foul oil lines. Clog oil pumps. Virtually ruin motors in interfering with lubrication! And usual tests don't safeguard against it.

What can be done to prevent dangerous sludge formation in Shell Oils? *No chemical* test known today can dependably predict whether or not a motor oil will sludge in service. Hence Shell, with the characteristic thoroughness that marks every Shell manufacturing operation, develops a special mechanical test, an actual *service* test which employs a specially built gasoline motor.

In its crankcase Shell Motor Oils come face to face with service conditions of the most rigorous variety. Here any tendency to sludge is observed, measured.

And, from actual service results so obtained, Shell Motor Oils are refined to meet the exacting requirements of actual use.

☆ ☆ ☆ ☆

This sludge test is typical of the ceaseless effort exercised in the manufacture of all Shell products to guarantee excellence of performance beyond that insured by standard specifications.

SHELL PETROLEUM PRODUCTS

Nine strategically located Shell Refineries: Arkansas City, Kan.; Coalinga, Cal.; Dominguez, Cal.; East Chicago, Ind.; Houston, Texas; Martinez, Cal.; Norco, La.; Wilmington, Cal.; Wood River, Ill.

Deep Sand in West Cole Field, Webb County; May Develop Into Very Important District

SAN ANTONIO, Tex., Aug. 6.—The recently discovered deep producing sand in the West Cole Field of Webb County may prove to be one of the most important areas opened during recent years in the Southwest Texas area. The sand has been definitely picked as the Cockfield or more widely known in that area as the Yegua. Several prominent geologists have expressed their opinion that the field will be of major caliber and cover a large area.

Interest was turned to the area last week when United Production Co.'s No. 2 Bruni, second deep producer for the area, came in flowing at the rate of 45 bbls., or 41.7 gravity oil per hour through one-quarter inch choke and showed 500 pounds pressure on tubing and 750 pounds on casing. The choke has since been reduced to three-sixteenths inch and at last report was flowing 20 bbls. per hour to storage. It topped the sand at 3,390 feet and bottomed hole at 3,421 feet.

The discovery well, No. 1 Bruni, had sand from 3,410-13 feet and from 3,414-17 feet and came in jetting about 60 bbls. of high gravity oil daily. Operators are now coring the well deeper in hopes of completing it for a good producer. At last report it was 3.425 feet in sand and on a drill stem test at that depth sprayed oil through the tester.

O. W. Killam has constructed a temporary switch on the Texas-Mexican railroad at Bruni to load the oil into tank cars. Killam is also building a loading rack at Bruni.

About a mile north of the new producer, Cole Petroleum Co.'s No. 85 Benavides, was preparing to drill plugs after setting 7⅝-inch casing at 3,390 feet. It had sand at 3,400-06 feet and tested 240 feet of oil. It cored hard sand from 3,406-10 feet, shale 3,410-17 feet, rock 3,417-18 feet, and oil sand from 3,418-22 feet. The well should be brought in during the early part of the week. Cole Petroleum Co. staked location for No. 86 Benavides in Survey No. 1 of the Callihan homestead tract.

If this field proves prolific, as many are expecting it to, it will in all probability lead to an extensive deep drilling exploration program for the Yegua throughout the Southwest Texas area. At present these wells are the deepest in the Laredo district.

Fidelity Exploration Co.'s No. 1 Soldivar, in Survey No. 657, was drilling crystallized shale and iron at 2,026 feet.

San Patricio County

In San Patricio County, Continental and Atkins & O'Neil's second well for the Angelita Field proved quite disappointing during the past week. No. 2 Welder, two locations south of Circle W Oil Co.'s No. 1 Welder, came in flowing some oil with the drilling fluid and making considerable gas, but later went to salt water. It was flowing through half-inch choke and showed 1,700 pounds pressure on tubing and 600 pounds on casing. At last report it was standing with total depth of 5,383 feet. Same operators' No. 1-A Welder was coring at 5,662 feet. On a drill stem test from 5,441-49 feet it showed salt water with a little oily mud.

At Sinton in San Patricio County, Petrol Corp.'s No. 1 R. H. Welder, west of Plymouth's discovery, was shut down for orders at 6,000 feet. A Schlumberger test showed a good sand from 5,405-35 feet. The well will probably be plugged back and sidetracked to the sand for a test. Plymouth Oil Co.'s No. 2-A Welder, about 1,320 feet due east of No. 1-A, was drilling plugs with total depth of 5,431 feet. Heep Oil Co.'s No. 3 R. Welder, northwest of Sinton, was drilling shale at 4,795 feet.

Atlantic Oil Producing Co. is reported working a two-instrument torsion balance crew about 3 miles north of Sinton and in the J.M.&F. Survey. Shell Petroleum Corp. is reported working a four-instrument torsion balance crew east of Sinton.

Bastrop County

In the southern part of Bastrop County, Joe Mills and others' No. 1 H. H. Litton, northwest of Cedar Creek Field, was reported flowing about 14 bbls. per hour and still showing considerable mud and drilling fluid with the oil. Total depth is 1,629 feet.

Bee County

About 9 miles northwest of Beeville in Bee County, R. H. Feltner and others' No. 1 Theis, in the Caetano Rivas Survey, was shut down for fuel oil at 3,915 feet. If the well fails to find production in the Pettus it will probably be carried to the Yegua.

In the Caesar area of Bee County, Falvey and others' No. 1 Gardner, in a 10-minute drill stem test from 3,053-64 feet showed eight joints of mud and salt water with only a slight show of oil. At last report it was shut down for orders. About 3 miles west of Papalote and 4 miles south of Skidmore, Howeth & Swiger's No. 1 Mary Schramm estate, in the Hugh O'Brien Survey, was drilling at 5,300 feet. It tested salt water in sand from 4,980-86 feet. Southwest of the Tuleta Field, Walton & Heard's No. 1 Rapp, in the Jose Maria Uranga Survey, was drilling below 2,500 feet.

North Pettus Area

The North Pettus area marked up two producers during the week. Houston Oil Co.'s No. 3-B Neihaus, in the B.S.&F. Survey, was completed for a big gasser spraying estimated 40 bbls. oil daily. It bottomed hole at 3,662 feet and showed a working pressure of 825 pounds on three-sixteenths inch choke. Magnolia Petroleum Co.'s No. 6 Porter, 660 feet east of No. 3 well, has been completed for 13 bbls. per hour. It topped the Pettus sand at 3,690 feet and bottomed hole at 3,700 feet. Houston Oil Co. was building derrick for No. 4-B Neihaus, 660 feet south of its No. 1-B. Magnolia Petroleum Co. has spudded on its No. 7 Porter, and Sun Oil Co. was building derrick for No. 2 Scarborough, 500 feet west of its No. 1 well.

Frio County

About 4 miles southwest of Pearsall in Frio County, Amerada Petroleum Corp.'s No. 2 Halff & Oppenheimer was drilling at 6,775 feet.

Duval County

In the old Driscol Pool of Duval County, Continental Oil Co.'s No. 2-A Clara Driscoll Sevier, in Section 448, was drilling at 4,131 feet in hard sand with no shows. Continental has a reflection crew shooting the Driscoll ranch.

Government Wells

About 6 miles northeast of the Government Wells Field and 3 miles south of the Duval-McMullen County line, Harvey & Henderson have staked location for No. 1 Serna, 330 feet from the north line and 330 feet from the east line of the S half Section 384.

The Government Wells Field marked up seven completions during the week, of which five were oil producers, one gas well, and one abandonment. Magnolia Petroleum Co.'s No. 29 Duval County Ranch was completed for 50 bbls. daily with total depth of 2,316 feet. Same operator's No. 2 L. B. Moody bottomed hole at 2,373 feet and has been completed for 35 bbls. per day. Same operator's No. 3 Tankersley came in for 50 bbls. per day with total depth of 2,298 feet. Russ and others' No. 8-A Hahl bottomed hole at 2,304 feet and has been completed for 10 bbls. per hour. Sun Oil Co.'s No. 66 Weiderkehr made 25 bbls. per hour at 2,286 feet. Bridwell Oil Co.'s No. 1 Schoolfield & O'Brien was abandoned as dry with total depth of 2,434 feet. Humble Oil & Refining Co.'s No. 33 White was completed as a 10,000,000-foot gasser at 2,253 feet.

In the Sarnosa Field of Duval County, E. R. Thomas' No. 1 Well, in Survey No. 130, has been abandoned as dry with total depth of 2,510 feet.

Hidalgo County

In the southwestern part of Hidalgo County, Davis & Harrison's No. 1 Lula George, in Tract 13, Porcion 41, Ancient Jurisdiction of Reynosa, was preparing to make a drill stem test after topping sand that showed a high gas pressure at 4,130 feet. Heavy mud had been pumped into the hole to prevent a blowout. Union Sulphur Co.'s No. 2 American Rio Grande L. & I. Co., about 1¼ miles southwest of No. 1, recent abandonment, was drilling plugs after cementing surface casing at 1,156 feet. Union Sulphur Co. is reported working a reflection crew north of Edinburg and on the Ruth Scott estate.

Willacy County

In Willacy County, W. W. Silk's No. 1 Stillman, in Lot 16, Block 30, of the Santa Rosa Subdivision, was drilling 1,000 feet. It is reported to have had a heavy gas pressure at 602 feet. The well is on a block of 7,000 acres and is to be a 5,000-foot test.

Nueces County

In Nueces County, Midland Oil Co.'s No. 1 S. M. Noakes, in the Gregoria Fairias grant, was shut down at 6,009 feet.

Karnes County

North of the Caesar Field and in Karnes County, Harrison Oil Co.'s No. 1 Martin Shaffer, about 3 miles west of Green, was shut down at 1,400 feet.

Lee County

James E. Pederson's No. 1 Turner in the David Hudson Survey, Lee County, was drilling at 5,620 feet.

Starr and Jim Hogg

In the northern part of Starr County, Circle W Oil Co.'s No. 1 Block, in Survey No. 167, was drilling at 4,161 feet. Across the line in Jim Hogg County, Sun Oil Co.'s No. 2-E M. Guerra & Son was coring at 2,697 feet. Sun Oil Co. is reported working a three-instrument torsion balance crew along the Starr-Hidalgo County line.

Zapata County

In Zapata County, R. & M. Drilling Co. has staked location for No. 1 M. D. Slator, in Block 65 of the Mission Oil Co. Subdivision in the J. W. Borrego grant.

Wildcat Operations in Southwest Texas

Week Ending August 4

ATASCOSA COUNTY

J. R. B. Moore's No. 1 A. Riley, center of Blk. 2 of survey, or 6,300 ft. from S line and 3,500 ft. from E line of county in F. Anthony Sur.
Drlg. rock 1,196 ft.; no report.

BANDERA COUNTY

Peerless O. & G. Co.'s No. 1 Garrison Sur. No. 506, 1,500 ft. from N and 2,700 ft. from E lines of Sur. (3 mi. SW of Medina).
Set 500 ft. of 15½-in. csg.; S.D.

BASTROP COUNTY

Joe Mills et al's No. 1 H. H. Litton, 1,040 ft. SE line and 1,005 SW line of 320-ac. tract in Antonio Navarro Sur.
T.D. 1,629 ft.; flowing 14 bbls. hr.; considerable mud and drlg. fluid.

BEE COUNTY

Caesar Oil Co.'s No. 1 Pullin Est., F. Lewis Sur.
S.D. after storm; derrick down.
R. A. Davids' No. 1 Baptist Church, center of 3-ac. church lot, or 150 ft. E of N line of Pullin est., 27-ac. tract in F. Lewis Sur.
Rigging up.
Falvey et al's No. 1 Gardner, 330 ft. out of NE cor. of Gardner tract.
T.D. 3,030 ft.; S.D. for orders; D.S. 3,053-64 ft. in 10 min. showed 8 joints mud and S.W. with slight show oil.
R. H. Feltner et al's No. 1 Theis, 2,376 ft. E line, 990 ft. S line of 1,034-ac. tract, or 3,640 ft. E line and 3,070 ft. N line of Caetno Rivers Sur.
T.D. 3,915 ft.; S.D.
Howeth & Sivigers' No. 1 Marie Schramm est., 2,332 ft. from W line, 466 ft. from N line of the Schramm 156-ac. tract in Hugh O'Brien Sur. 4,400-ac. block.
Drlg. 5,300 ft.
E. M. Jones' No. 1 S. E. Robinson, 990 ft. W line and 330 ft. S line of tract in ranga grant, Sec. 5.
Derrick.
Walton & Heard's No. 1 Rapp, 330 ft. from N and W lines of S½ SE Sec. 5, of Jose Marie Uranga grant.
Drlg. 2,500 ft.
Weekly Oil Corp.'s No. 1 Laura Weiss, B.&B. Sur., 660 ft. E of No. 1.
Drlg. 310 ft.
Worth Oil Co.'s No. 1 Rutledge, 1,000 ft. from N line and 300 ft. from E line of A. Hadley Sur.
Spud and S.D.

BEXAR COUNTY

A. M. Blume's No. 2 Ridder, 2,500 ft. S line, 2,500 ft. W line of SW cor. of Munroe Sur., in J. M. Barrera Sur.
S.D. 440 ft.

J. G. Bowles' No. 1 Dillon, 750 ft. from road on E and 4,750 ft. from S line of survey, Manuel Delund Sur.
T.D. 1,182 ft.; fishing.
Dr. Dickens' No. 1 Victor Golia, 150 ft. NW line and 150 ft. NE line of Cardines No. 25 Sur.
Location.
C. A. Smith's No. 1 Henry Lamb, 750 ft. from N and E lines of Lamb farm, in de la Garza grant.
T.D. 982 ft.; show of oil and gas from 968-82 ft.; W.O.C.

BURLESON COUNTY

C. & C. Drlg. Co.'s No. 1 Seaboard Oil Co. Set surface csg.

CALDWELL COUNTY

S. S. Cargill's No. 2 Damereau, 150 ft. from W line, 450 ft. from N line of D. Cooper Sur.
Top Edwards 2,260 ft.; S.O.; T.D. 2,362 ft.; testing.
F. P. Hynes et al's No. 1 Tramwell, 750 ft. from SE line and 330 ft. from NE line of tract in Ester Berry Sur.
Location.
Montevista Oil Co.'s No. 1 W. I. Pope, 1,000 ft. from W line and 1,750 ft. from S line of J. D. Rains Sur., in I. Rains Sur.
Drlg. shale 525 ft.
M. C. Moore's No. 1 Lackey, 440 ft. NW line, 150 ft. NE line of Lackey's 193.75-ac. tract, or 450 ft. NW line and 2,600 ft. NE line of Damon Sur.
T.D. 1,510 ft.; S.D.
Newton Oil Co.'s No. 1 A. D. Mebane, 3 miles southwest of Lockhart.
Rigging up.

DEWITT COUNTY

Keystone Royalties' No. 1 L. T. Burns, 1,100 ft. from W and 600 ft. from S line of 302-ac. tract in L. G. Belcher Sur.
T.D. 2,623 ft.; S.D.

DUVAL COUNTY

Beer & Lewis' No. 1 Peters, Sur. 27.
T.D. 1,200 ft.; S.D.
Buffalo-Texas Drlg. Synd., Inc.'s No. 1 Escobar, 700 varas from W line, 1,000 varas from N line of 920-ac. tract in Francisco grant.
Shale 2,217 ft.; S.D.
Dr. J. H. Butte et al's No. 1 Tom Graham, 1,132 ft. N line, 2,275 ft. W line, Sec. 572, E line of county and N line of San Diego Location.
Chiquita's No. 2 Richardson, 350 ft. N and W line of survey and block in Blk. 3 Sur. No. 3.

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New Oil Pool Is Assured in Andrews County; Discovery in Making West of Bryson Pool

By L. E. BREDBERG
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Aug. 6.—The Permian Basin in the West Texas district was assured another oil pool Sunday, August 5, when the wildcat test of Humble Oil & Refining Co. No. 1-R M. Means, in the north central part of Andrews County, Section 2, Block A-35 P.S.L. Survey flowed 199 bbls. in 24 hours, of which 30 per cent was wash water. The last 12-hour gauge ending at 7 a. m. August 6, it flowed 129 bbls. with the wash water decreasing to 4 per cent. The first 12 hours it flowed through 52/64-inch tubing choke, after it had been washed for 4 hours through 2½-inch tubing.

The discovery comes as no surprise as it has been looked upon favorably ever since it tested 10,800,000 feet of gas at 2,957 feet. Production is coming from the Permian lime which was reported topped at 4,070 feet. With a total depth of 4,492 feet it is 422 feet in the lime.

The majority of the acreage held around the test is owned by the Humble Oil & Refining Co., with the Stanolind Oil & Gas Co., Sun Oil Co., Shell Petroleum Corp., and a few independent operators holding the nearest acreage to the test. Leasing throughout the county has been active most of the year with $10 per acre being the average price before the well was drilled. However, acreage near the test advanced as high as $125 per acre cash and $125 in oil before the well was drilled in. Due to the discovery of a new pool, an added leasing campaign will no doubt take place in the western parts of Andrews, Gaines and Yoakum Counties.

The nearest pipe line is Atlantic Pipe Line Co.'s 8-inch line from the Hobbs Pool in Lea County, New Mexico, to the town of Midland in Midland County, however, the Humble Pipe Line Co. will no doubt lay a line from the discovery well to connect with its own 4-inch line in the Deep Rock Pool which is about 15 miles southeast of the discovery well.

Thirteen locations and 16 completions were reported for the district during the week.

Humble Oil & Refining Co. has made a location for a Permian lime test on its White and Baker lease in Pecos County. The test is in Section 4, Block 179, T.C.R.R. Survey. The company recently abandoned No. 1 White and Baker which was drilled in search of Ordovician lime production.

Upton Test

The other test which is making a bid for production, from the Ordovician lime, in Upton County, is Gulf Production Co.'s No. 103 McElroy, in the McElroy Pool, in Section 197, Block F, C.C.S.D. &R.G.N.G. Survey. After drilling plug the first of the week the hole was deepened 3 feet to a total depth of 10,633 feet. Two and one-half inch upset tubing was run to 10,604 feet in 9½ hours leaving 29 feet of open hole at the bottom. The operators are connecting up and preparing to wash the hole for a test. A showing of oil and gas in cores between 10,581 and 10,630 feet caused the operators to stop and set casing and make a test. It is to be drilled deeper if it does not develop commercial production at this depth. It is the deepest hole in Texas.

Ector County

In Ector County, Humble Oil & Refining Co.'s No. 1 Peques, one-half mile south of the Addis Pool, had a showing of oil and gas at 3,940 feet and a slight showing of oil from 4,050-60 feet, but failed to develop production on a test from 4,195-4,207 feet and is coring at 4,228 feet. It is in Section 37, Block 43, Township 2s, T.&P. Survey. Landreth Production Co.'s No. 1 Clarence Scharbauer, a wildcat test, in the same county, which has been shut down for several weeks, is preparing to resume drilling at 3,765 feet. It is the most interesting test in the county due to its location. It is 6 miles southeast of C. J. Davidson's No. 1 Cummins discovery well which opened the sixth producing area in the county a few weeks ago.

Scurry County

Two miles southeast of the Ira Pool, in Scurry County, Paul C. Teas and Darby Petroleum Co.'s No. 1 Chapman swabbed 1¼ bbls. of oil hourly after being treated with 1,000 gallons of acid. It encountered the pay from 1,726-34 feet, the total depth. It is in Section 100, Block 97, H.&T.C. Survey.

Howard County

Three-quarters of a mile north of production in Howard County, Illinois Oil Co.'s No. 1-B Davis obtained an increase in oil at 2,507 feet and was drilling at 2,727 feet. Same company's No. 1-A Davis was completed last week for a 600-bbl. well. The two wells are in Section 2, Block 30, Township 1s, T.&P. Survey.

Yates Field

In the Yates Field, Pecos County, Mid-Kansas Oil & Gas Co.'s No. 27 Smith-Taylor, located in Section 33, Block 194, G.C.&S.F. Survey, was completed for an initial production of 1,187 bbls. per hour at a total depth of 1,345 feet.

Barnsdall Oil Co.'s No. 1 Smith, in the NW cor. Section 12, Block 43, Township 1s, T.&P. Survey, an outpost test, 2 miles southeast of the nearest production of the North Cowden area, Ector County, has been completed as a small pumper. It made 70 bbls. on July 30, but has dropped off to around half this much a day. Total depth is 4,425 feet, and it defines the eastern limits and makes drilling to the south rather doubtful although there is sufficient room for a narrow strip to be produced between this small producer and a dry hole 3 miles to the west, drilled by Gilpin and others.

North Cowden Area

Phillips Petroleum Co. and Sun Oil Co. entered the developing ranks in the North Cowden area this week. The former company staked its first location in the county in many months, in Section 3, Block 43, Township 1s, T.&P. Survey. The latter company has a rotary derrick on the A. W. Wright ranch, in Section 2 of the same block. It is about midway between production in the pool and the Barnsdall pumper. Shell Petroleum Corp. staked a location in the northern part of the Penn Pool, in the same county, which is the most interesting and active county of the Permian Basin at the present time.

Reeves County

Eppenauer Drilling Co. has spudded a wildcat about 1 mile west of Toyah in Reeves County, and will drill to 4,100 feet according to the contract. It is on the Altman ranch in Section 1, C. C. Wyatt Survey. J. E. Cunningham is a large interest holder in this test around which several major companies have purchased protection acreage.

WICHITA FALLS DISTRICT

The Cordova Union Oil Corp. of Fort Worth has a discovery in the making 3½ to 4 miles west of the Bryson Pool of Jack County, but in Young County. Location is on the M. K. Graham farm in the B.B.B.&C. Survey, in the east central part of the county. The sand, which is the Basal Strawn series, was logged from 3,640-59 feet, casing was set at 2,965 feet and the hole is to be straight-reamed to the top of the oil sand. Between the bottom of the casing and this sand there are two other sands, one is 22 feet thick and the other 55 feet thick, both showing gas and oil but too high to pay off. The deeper sand is the eighth sand logged showing gas, oil or water from 2,300 feet down. The test is slopping over and is estimated good for 12 bbls. per hour. As soon as the test is put on production other drilling is expected by offset and nearby lease owners.

Regal Oil Co. of Wichita Falls has made location for a 2,000-foot test on the Gilliland ranch in the northeast corner of the N. Selinas Survey, Wichita County. This is the first of two such tests to be put down on the 3,000-acre block held by the company 5 miles southeast of Burkburnett and adjoining the Red River.

Foard County

Foard County is to get another wildcat in the near future. O. J. Weaver of Fort Worth is to drill a 4,250-foot test on a 5,000-acre block centering in Section 16, Block 44, H.&T.C. Survey, to be spudded by November 1.

Christie Brothers have completed an exceptionally good well in the area opened to production in 1922, and 1,600 feet northwest of a 150-bbl. well of their's. This test, No. 2 Jeffery, on the east line of the I. L. Aud Survey, flowed 155 bbls. in six hours from lime pay logged at 3,886-88 feet. When deepened one-half foot it made 30 bbls. per hour. The discovery will lead to more drilling on nearby acreage.

Capitan Oil Co.'s No. 1 Newton, in the NE cor. Section 1, Lot 1, Block 20, T.&P. Survey, 3 miles southeast of Hawley, in Jones County, an offset to the discovery of the Texas Inland Oil Co., logged the sand from 1,749-57 feet and is estimated good for 150 bbls. per day. It is the second test in this wildcat pool. The latter company has just completed a third well in the pool.

Locations and completions continue to decline in the Wichita Falls district, due to the limited amount of water for drilling purposes. There were only 23 locations staked this week and completions fell to a new low, 31.

Runs from the district for the week averaged 62,120 bbls. per day, a decrease of 1,000 bbls. per day under the previous week's report.

Wildcat Operations in West Texas

Week Ending July 30

ANDREWS COUNTY

Honolulu and Llano Oil Co.'s No. 1 J. E Parker, 1,320 ft. from S line and 1,470 ft. from W line of Sec. 7, Blk. A-44, P.S.L. Sur.
Drlg. 2,100 ft.

Humble Oil & Ref. Co.'s No. 1 B. S. Walker, 660 ft. from E line and 660 ft. from S line of Sec. 6, Blk. A-43, P.S.L. Sur.
T.D. 385 ft. Running csg.

Humble Oil & Ref. Co.'s No. 1 R. M. Means, 660 ft. from N and 660 ft. from E of Sec. 2, Blk. 2-35, P.S.L. Sur.
Flowed 129 bbls. last 24 hrs.

BORDEN COUNTY

Continental Oil Co.'s No. 1 Johnson, 660 ft. from S line and 660 ft. from E line of Sec. 34, Blk. 32, Twp. 4n, T.&P. Sur.
Drlg. 1,900 ft.

BREWSTER COUNTY

Joiner-McIntyre's No. 1, 853 ft. from S, 2,390 ft. from E of Sec. 31, Blk. 352, W. M. Mitchell Sur.
Drlg. 2,125 ft.

COKE COUNTY

Wm. Hooper's No. 1 Gaston, 240 ft. from S line and 654 ft. from W line of Joseph Sur. No. 11.
U.R. 2,550 ft.

CRANE COUNTY

Brandon et al's No. 1 J. Cowden, 330 ft. from N and 330 ft. from W line of Sec. 13, Blk. X, C.C.S.D.&R.G.N.G. Sur.
D. and A. at 3,345 ft.

Gulf Prod. Co.'s No. 1 E. M. Snodgrass, 1,320 ft. from N and 1,320 ft. from W line of Sec. 1, Blk. B-25, P.S.L. Sur.
Drlg. 2,945 ft.

Texas Co.'s No. 25 King, 1,695 ft. from E line, 2,700 ft. from E line, Sec. 35, Blk. 4, C.C.S.D.&R.G.N.G. Sur.
Location.

Wahlenmaier Pet. Corp.'s No. 1 W. P. Edwards, 330 ft. from N and 330 ft. from E of SW cor. of the NE of Sec. 12, Blk. B-23, P.S.L. Sur.
Will pump.

CROCKETT COUNTY

J. D. Young's No. 1 Shannon, 330 ft. from W line, 330 ft. from N line of Sec. 36, Blk. 1, G.C.&S.F. Sur.
S.D. 2,000 ft.

CULBERSON COUNTY

Anderson-Pritchard Oil Corp.'s No. 1 Borders, 1,355 ft. N and 2,305 ft. from W. Sec. 34, Blk. 69, P.S.L. Sur.
S.D. 400 ft.

Miller Bros.' No. 1 fee, 1,900 ft. from N and 660 ft. from E line of Sec. 31, Blk. 97, P.S.L. Sur.
S.D. 1,100 ft.

DAWSON COUNTY

Ray Albaugh et al's No. 1 John Robinson, 1,320 ft. from N line, 1,320 ft. from W line of Sec. 46, Blk. M, E.L.R.R. Sur.
S.D. 2,351 ft.

ECTOR COUNTY

Atlantic Oil & Prod. Co.'s No. 2 Holt, 660 ft. from N line and 1,980 ft. from E line of Sec. 19, Blk. A, P.S.L. Sur.
S.D. 1,150 ft.

Continental Oil Co.'s No. 2 O. B. Holt, 1,980 ft. from S line and 1,980 ft. from W line of Sec. 20, Blk. A, P.S.L. Sur.
Set csg.

Continental Oil Co.'s No. 1-A Kloh, 440 ft. from N line and 2,200 ft. from E line, Sec. 2, Blk. 43, Twp. 1s, T.&P. Sur.
Rig up.

C. J. Davidson et al's No. 1 Cole, 660 ft. from N line and 660 ft. from W line of Sec. 19, Blk. 43, Twp. 1s, T.&P. Sur.
Making 15 bbls. daily.

Harrison et al's No. 2 Addis, 990 ft. from N line and 2,200 ft. from W line of Sec. 35, Blk. 43, Twp. 2s, T.&P. Sur.
S.D. 2,320 ft.

Harrison et al's No. 3 Addis, 1,650 ft. from N line and 2,200 ft. from W line of Sec. 35, Blk. 43, Twp. 2s, T.&P. Sur.
Location.

Humble Oil & Ref. Co.'s No. 3 Jones, 2,310 ft. from S and 2,310 ft. from W, Sec. 6, Blk. 44, Twp. 3s, T.&P. Sur.
Drlg. 2,510 ft.

Humble Oil & Ref. Co.'s No. 1 H. H. Pegues, 2,310 ft. from E and 2,310 ft. from S, Sec. 37, Blk. 43, Twp. 2s, T.&P. Sur.
T.D. 4,207 ft.

Landreth Prod. Co.'s No. 2-A Texas Pacific Land Trust, 441 ft. from N line and 440 ft. from W line of Sec. 3, Blk. 43, Twp. 1s, T.&P. Sur.
Drlg. 4,010 ft.

(Continued on Page 46)

COMPLETIONS IN WEST TEXAS

Andrews County

Humble Oil & Refining Co.'s No. 1 Kuykendall, top pay 4,244-4,473 feet, initial production 16 bbls. in 24 hours through tubing, total depth 4,511 feet, plugged back to 4,473 feet.

Loving County

West Texas Petroleum Corp.'s No. 3-B J. G. Allen, top pay 4,340-4,353 feet, initial production 60 bbls. in 24 hours, total depth 4,356 feet.

Ector County

Landreth Production Co.'s No. 1-B Texas Pacific Land Trust, top pay 4,083-4,275 feet, initial production 900 bbls. in 24 hours, total depth 4,275 feet. Skelly-

(Continued on Page 44)

Another Disappointment in Cherokee County; Closer Definition of the Cayuga District

By L. E. BREDBERG

DALLAS, Tex., Aug. 6.—Another disappointment in the Rusk area of Cherokee County and closer definition of the Cayuga Field, northwest Anderson County, were the most important features of the East Texas district's activities during the week, causing these two areas to be further discounted as having major possibilities.

T. J. Wood and others' No. 2 New Birmingham Development Co., 660 feet west and 330 feet south of No. 1 discovery well, was proclaimed a dry hole this week when it drilled into salt water and bottomed at 5,163 feet or minus 4,723 feet, whereas the discovery well's total depth is minus 4,692 feet. The field, if it proves of major importance, will have to run due north or to the east. A dry hole was previously drilled about 5 miles to the west and the C. & G. Oil Co. recently abandoned a test about 6½ miles to the northeast near the town of Rusk.

Test Closely Watched

The test of Zilkey & McCulloch on the Bradford farm, about 10 miles to northeast, mostly east, of the discovery well, will be closely watched. It has been shut down for water, but was to start this week. Total depth is 3,930 feet. It is in the J. Armendaris Survey. Goldston and others' No. 1 Southern Pine Lumber Co. in the N. Newton Survey, about 2½ miles south of the discovery well, will attract little interest since the second test has proved dry south of the discovery.

The discovery well stopped flowing this week, the operators having difficulty in kicking it off and starting it flowing again. However, it is now gauging as before, around 325 bbls. per day, showing between 15 and 20 per cent salt water and basic sediment through one-fourth-inch choke. The well made salt water when first drilled so the operators plugged it back, whipstock was set and the hole redrilled about 180 feet, topping the sand in this new part of the hole at 5,120 and drilling only 3 feet in the sand to complete.

A disturbing report came in from another part of Cherokee County this week. Southern Gulf Oil Co.'s No. 1 Joe Bailey, in the L. R. Rhodes Survey, 4 miles northeast of Ponta in the eastern part of the county, made a head of oil on the morning of August 6, carrying mud, oil and gas. However, the test was supposed to be in Austin chalk and the hole had been lubricated with 128 bbls. of oil in an effort to pull a stuck drill pipe, therefore company men were prone to doubt that the "head" was free oil. Total depth is 4,157 feet. It topped the Pecan Gap chalk at 3,125 feet and broken Austin chalk at 3,878 feet. Elevation is 386 feet.

Cayuga Area

American Liberty Oil Co. has ordered its No. 1 Trinity Farms Security Co. test, in the J. B. Bonham Survey, Freestone County, abandoned at a total depth of 4,128 feet after encountering shale and salt water sand from 4,111-4,128 feet. This test hedges the Cayuga Field on the west as it is across the Trinity River, and about 3 miles west and a little south of the discovery well. Trinity Farm Security Co.'s (Harwell) No. 1 Fee, in the Williamson Survey, about 2 miles south of the above test in the Bonham Survey, Freestone County, is another outpost marker. A drill stem test made with packer set at 3,985 feet, and opened 3 minutes showed approximately 630 feet of mud and a little gas, with no oil or water. Total depth is 4,045 feet. It will be plugged back to 3,980 feet, casing set and completed for a gas well in the upper Woodbine sand logged near 3,888 feet. Elevation is 253 feet.

Stanolind Oil & Gas Co. is preparing to put its No. 1 Tubbs, in the S. Edmondson Survey, on the extreme northeastern corner of the Cayuga Field, on the pump after it failed to flow steady at total depth of 4,088 feet in shale. The sand was logged from 4,068-76 feet. It is the first well to be "put on the beam," although dry holes or gas wells have been drilled to the northwest, north, northeast, west, southeast and southwest. There is but little chance for the field to expand much further unless due south and Tidewater Oil Co. and Texas Seaboard Oil Co. No. 1 Sullenberger, in the William Snider Survey, about 2½ or 3 miles due south of the discovery, will soon determine that. It is drilling at 3,850 feet in sandy shale, making exceptionally good drilling time. Same companies' No. 1 Royall & Cone, on the northwest side, in the Johns Survey, has been plugged back from the Georgetown lime, total depth 4,666 feet, to 4,045 feet and completed as a heavy gasser, having tubing pressure of 1,500 pounds. Same companies' No. 1 Rampy, in the Wilson Survey, northeast of the discovery well, had no oil at 4,082 feet and has been plugged back to 3,980 feet, probably to complete as a gasser.

Wildcats

Canadian Oil Co.'s No. 1 Jackson, in the William Caldwell Survey, south of Tennessee Colony, western Anderson County, topped the Woodbine sand at 4,790 feet and is now coring after taking a core from 4,775-95 feet, the top of which showed speckled shale, and the bottom showed ashy sand and sand having no showing of oil or gas. This test is approximately midway between the Long Lake Pool in southwest Anderson and the Cayuga Field in the northwestern part of the county.

Sun Oil Co.'s test on the Erskine farm in the S. C. Box Survey, approximately 12 miles south of the Long Lake Field, Anderson County, is drilling shale at 5,586 feet. The end of this test is near unless it picks up a gas or oil showing before much deeper drilling.

Killough and Tucker's No. 1 G. B. Young, in the J. Boone Survey, approximately 5 miles southwest of the Long Lake Pool, but across the river in Leon County, is drilling below 4,225 feet. It topped the Pecan Gap chalk at 3,945 feet and went out of it at 4,065 feet. This is interesting due to its location in regard to the Long Lake Pool where gas predominates in the five producers.

Campbell and Chamberlin are drilling below 800 feet on the R. Ansley farm in the N. H. T. Thompson Survey, Henderson County, the second active test in this county at present. Another test has only a derrick up.

Normangee Corp. has spudded and shut down on a proposed test 2½ miles northeast of Normangee in Leon County. Location is on the B. H. Henry farm in the Robert Rogers League, near the northwest corner of the county. This will be the first Woodbine test for this corner.

Material is being moved in for a test on the C. O. Wright farm in the Sarah McAnulty Survey, 2 miles south of Wortham in Limestone County, and Headwater Oil Co. is moving in material for a wildcat 8 miles east and south of Henderson in Rusk County. Location is on the F. L. Gary farm in the Jose A. Mora Survey.

Balcones Fault Trend

The two Trinity sand tests drilling in the Mexia and Corsicana-Powell Pools, in Limestone and Navarro Counties, respectively, with the Wright test at Wortham, and Stanley Thompson of Fort Worth taking over a test 3 miles west of Mexia, skidding the rig over from a junked hole, and a test in the Curry Pool north of Mexia to be carried on down, but which was started by the late William Keeling, a pioneer operator, are all creating more interest in the Balcones Fault zone from Wortham to Corsicana. This is the most activity this area has had for many years, and in case Wheelock and Collins' No. 1 Cerf in the James Smith Survey, Navarro County, the Trinity sand test in the Corsicana-Powell Pool, or Peyton Brothers' No. 1 Steubenrauch, in the P. Varela Survey, at Mexia, make a Trinity sand producer, interest will immediately be focused along this trend once more, companies and indeepndents drilling deeper to seek the pay horizon below the prolific, high gravity producing Woodbine sand from which the wells in these pools are now producing. Several tests drilled in quest of Trinity production in these two areas, have had showings of oil and gas, making the present two Trinity tests most interesting.

L. W. Witherspoon and D. M. Fulton of Dallas have let contract to James and Morgan of that city for a 4,000-foot test on an 11,000-acre block 7 miles north of Irving in Dallas County. Location is in the River View Co.'s 2,200-acre tract in the Sam T. Brown Survey. This is the first test in this county in several years.

A location has been staked on the C. V. Gilbreath farm in the H. M. Brewer Survey, about 1 mile northwest of Reklaw in the eastern part of Cherokee County, near the corner of Rusk County. Rowan and Nichols of Fort Worth and Simms Oil Co. are to drill this test which is located on a 5,000-acre block.

EAST TEXAS FIELD

Bottom hole pressure tests on key wells in the East Texas Field, August 12 will be anxiously watched to note the fall of the average pressure as calculated by these tests made by the engineering department of the Railroad Commission under Harry Miles in charge of that department at Kilgore. The last weighted average as of July 12, was reported at 1,229 pounds and the next average is expected to be below the July, 1933, level which was the low for the field because of excessive withdrawals, around 1,000,000 bbls. of oil per day having been taken from the wells at that time and bringing the pressures down to 1,223 pounds. There are now over 14,100 wells flowing in the field. Daily average trunk line runs from the field for the week ending August 2 were 474,265 bbls., a drop of 13,300 bbls. per day under the previous week's reports. Runs to local refineries also fell off. This week they averaged 73,425 bbls. per day whereas the previous week's daily average was 74,545 bbls. per day. The daily average deliveries over and above reported production was 77,365 bbls. Tank car shipments fell from

East Central Texas Wildcats

Week Ending August 6

ANDERSON COUNTY

Barnsdall Oil Co.'s No. 1 Loper, 467 ft. from N and W lines of 40-ac. tract, 1 mile SW of Cayuga, James Wilson Sur.
Drlg. 3,882 ft.

Canadian Production Co.'s No. 1 R. M. Jackson, 1,250 ft. from NE cor. and 3,058 ft. from SE cor. of survey and tract, W. C. Caldwell Sur.
Drlg. 4,428 ft.

H. L. Hunt's No. 1 C. A. Miller, 1,120 ft. from SE line and 1,120 ft. from SW line of 196.6-ac. tract, 1 mile S of Tucker, S. Sanchez Sur. No. 2-10.
Drlg. 1,300 ft.

J. A. Johnson et al's No. 1 Mrs. N. B. Huffman, 1,650 ft. from W line and 2,700 ft. from S line of survey, 10 miles NW of Palestine, R. S. Patton Sur.
Rig up.

Stanolind Oil & Gas Co.'s No. 1 Loper, 463 ft. S and 466 ft. E of NW cor. of 40-ac. tract, James Wilson Sur.
Location.

Sun Oil Co.'s No. 1 Erskine, 200 ft. from S line of survey and 2,000 ft. from Trinity River, Samuel C. Box Sur., SW part of county.
Drlg. 5,300 ft.

Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 1 Royal and Cone, 467 ft. from S line and 1,533 ft. from E line of 92-ac. tract, Thomas Bristow Sur.
T.D. 4,666 ft.; P.B. to 4,060 ft.

Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 2 Robertson, 633 ft. from W line and 467 ft. from N line of lease, Samuel Snider Sur.
Derrick.

Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 1-C N. N. Wills, 477 ft. from S line and 467 feet from W line of tract, Thomas Bristow Sur.
Location.

Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 1 V. W. Bowyer, 467 ft. from E line and 1,240 ft. from S line of 300-ac. tract, M. H. Johns Sur.
Drlg. 3,999 ft.

Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 6 Edens, 419 ft. from N line, 1,400 ft. from E line of lease, S. Snyder Sur.
Drlg. 2,305 ft.

Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 1 Rampy, 1,256 ft. from N line and 1,275 ft. from E line of 158.66-ac. lease, J. Wilson Sur.
Drlg. 3,910 ft.

Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 2 Robertson, 633 ft. from W line of tract and 467 ft. from N line of lease, S. Edmondson Sur.
Derrick.

Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 1 M. H. Sullenberger, 1,541 ft. S of most northerly N line and 1,400 ft. W of most easterly E line of lease, Wm. Snyder Sur.
Drlg. 3,295 ft.

Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 7-A N. W. Willis, 2,277 ft. from N line and 5,467 ft. from W line of lease, S. Edmondson Sur.
Location.

CHEROKEE COUNTY

Gholson et al's No. 1 Southern Pine Lumber Co., 330 ft. out of NW cor. of 80-ac. tract, N. Newton Sur.
Drlg. 1,375 ft.

H. L. Hunt Production Co.'s No. 1 Powell Lumber Co., 467 ft. from S and W lines of 52-ac. tract, 1 mile E and one-quarter mile N of discovery well, D. W. McNab Sur.
Location.

Jackson Oil & Gas Co.'s No. 1 H. D. Henderson, 660 ft. from N and W lines of 40-ac. tract out of Tankersley 104-ac. tract, 5 miles NE of Jacksonville on W side of railroad, J. Pineda Sur.
Derrick.

Milhous Drilling Co.'s No. 1 O. R. Perkins, 1,206 ft. from W line of Perkins 164-ac. tract and 655 ft. from N line of lease, J. M. Martinez Sur.
Drill stem stuck; T.D. 2,460 ft.

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755 per day during the previous week to 310 per day this week.

There were 72 tests completed this week and 69 locations were staked.

COMPLETIONS IN EAST TEXAS

North Gregg County

Adams and Lyles' No. 11 Anderson, top sand 3,472 feet, initial production 25 bbls. in 20 minutes through open tubing, total depth 3,492 feet. Arkansas Fuel Oil Co.'s No. 8-A McKinley, top sand 3,572 feet, initial production 26 bbls. in one-half hour through open tubing, total depth 3,593 feet. J. G. Beard's No. 5 J. M. Farrell, top sand 3,622 feet, initial production 65 bbls. per hour through open tubing, total depth 3,645 feet; No. 7 W. L. Fuller, top sand 3,681 feet, initial production 28 bbls. in three hours' pumping, total depth 3,730 feet. Deep Rock Oil Co.'s No. 11 Jones, top sand 3,590 feet, initial production 35 bbls. in one-quarter hour through open tubing, total depth 3,650 feet. Paul Doran and others' No. 2 Bingham, top sand 3,564 feet, initial production 75 bbls. per hour through three-quarters inch tubing choke, total depth 3,600 feet. Faith Oil Co.'s No. 12 J. C. Barrett, top sand 3,660 feet, initial production 40 bbls. per hour through open tubing, total depth 3,694 feet. General Crude Oil Co.'s No. 10 Rembert, top sand 3,487 feet, initial production 15 bbls. in one-quarter hour through open tubing, total depth 3,520 feet.

Mary L. George's No. 2 B. F. Crosby, top sand 3,663 feet, initial production 12½ bbls. in one hour pumping, total depth 3,691 feet. L. Glasscock's No. 2 Mattox, top sand 3,592 feet, initial production 30 bbls. per hour through open tubing, total depth 3,598 feet. H. Hanbury's No. 8 T. L. Bray, top sand 3,659 feet, initial production 65 bbls. in one-half hour through open tubing, total depth 3,668 feet. Peckham and Medders' No. 2 L. P. League, top sand 3,580 feet, initial production 35 bbls. in 25 minutes through open tubing, total depth 3,589 feet. Charles Pettit's No. 6 Sheppard, top sand 3,543 feet, initial production 70 bbls. per hour through open tubing, total depth 3,587 feet. B. F. Phillips' No. 2-A League, junked and abandoned, total depth 3,358 feet. Sells Petroleum Corp.'s No. 8 Fisher, top sand 3,586 feet, initial production 90 bbls. per hour through open tubing, total depth 3,670 feet. Shell Petroleum Corp.'s No. 12 G. H. Slaton, top sand 3,591 feet, initial production 37 bbls. in one-half hour through open tubing, total depth 3,676 feet. Virginia Oil & Refining Co.'s No. 4 Harris, top sand 3,502 feet, initial production 75 bbls. in 24 hours' pumping, total depth 3,538 feet. Yount Lee Oil Co.'s No. 8 Calvin, top sand 3,549 feet, initial production 60 bbls. per hour through eleven-sixteenths inch tubing choke, total depth 3,555 feet; No. 11-A J. D. Davis, top sand 3,539 feet, initial production 55 bbls. per hour through eleven-sixteenths inch tubing choke, total depth 3,559 feet.

South Gregg County

Arkansas Fuel Oil Co.'s No. 8 Beavers, top sand 3,605 feet, initial production 24 bbls. in one-quarter hour through open tubing, total depth 3,628 feet. Bell and Grady's No. 2 Daniels, top sand 3,523 feet, initial production 18 bbls. in 10 minutes through open tubing, total depth 3,560 feet. Champlin and Bass' No. 9 J. B. Watson, initial production 25 bbls. in one-quarter hour through open tubing, total depth 3,613 feet.

Gulf Production Co.'s No. 14 M. T. Cole, top sand 3,537 feet, initial production 72 bbls. per hour through open tubing, total depth 3,551 feet. Humble Oil & Refining Co.'s No. 67-B S. S. Laird, top sand 3,569 feet, initial production 77 bbls. per hour through open tubing, total depth 3,633 feet. Hunter and Rowe's No. 3 C. L. Still, top sand 3,587 feet, initial production 40 bbls. per hour through open tubing, total depth 3,660 feet. Invincible Oil Co.'s No. 3 Williams estate, top sand 3,551 feet, initial production 75 bbls. per hour through open tubing, total depth 3,566 feet. Magnolia Petroleum Co.'s No. 26 J. Radford, top sand 3,616 feet, initial production 100 bbls. per hour through open tubing, total depth 3,625 feet. Vireca Oil Co.'s No. 3 M. T. Cole, top sand 3,547 feet, initial production 110 bbls. per hour through open tubing, total depth 3,562 feet. Weaver-Crim Oil Corp.'s No. 11 Laird, top sand 3,573 feet, initial production 33 bbls. in one-quarter hour through open tubing, total depth 3,605 feet.

North Rusk County

Humble Oil & Refining Co.'s No. 115 L. D. Crim, top sand 3,617 feet, initial production 95 bbls. per hour through open tubing, total depth 3,639 feet; No. 120 L. D. Crim, top sand 3,635 feet, initial production 123 bbls. per hour through open tubing, total depth 3,658 feet; No. 8 Ladd, top sand 3,655 feet, feet, initial production 45 bbls. per hour through open tubing, total depth 3,691 feet; No. 52-B Laird, top sand 3,540 feet, intiial production 45 bbls. per hour through open tubing, total depth 3,627 feet; Magnolia Petroleum Co.'s No. 5 H. P. Leverett, top sand 3,702 feet, initial production 20 bbls. in one-fourth hour through open tubing, total depth 3,735 feet; No. 12 W. P. Moore, top sand 3,675 feet, initial production 26 bbls. in 10 minutes through open tubing, total depth 3,695 feet; Neversuch Oil Co.'s No. 9 A. Gibens, top sand 3,637 feet, initial production 40 bbls. in one-fourth hour through open tubing, total depth 3,665 feet.

South Rusk County

Acme Oil Co.'s No. 3 M. L. Thompson, top sand 3,685 feet, initial production 52 bbls. in 20 minutes through open tubing, total depth 3,734 feet; Burt Aston's No. 2-A J. R. Alford, top sand 3,674 feet, initial production 20 bbls. in 35 minutes through open tubing, total depth 3,751 feet; Atlantic Oil Production Co.'s No. 22 Kinney, top sand 3,556 feet, initial production 60 bbls. per hour through open tubing, total depth 3,631 feet; Capital Oil Co.'s No. 2-A Frederick, top sand 3,535 feet, initial production 20 bbls. per hour through open tubing, total depth 3,610 feet; Deep Rock Oil Co.'s No. 9 W. W. Holland, top sand 3,659 feet, initial production 17 bbls. in one-fourth hour through open tubing, total depth 3,725 feet; Haynes Drilling Co.'s No. 13 Clark, top sand 3,616 feet, initial production 40 bbls. in 20 minutes through open tubing, total depth 3,647 feet.

Arkansas Fuel Oil Co.'s No. 7 Bealle, top sand 3,744 feet, initial production, 70 bbls. per hour through open tubing, total depth 3,707 feet.

Humble Oil & Refining Co.'s No. 46-A M. and R. Kangera, top sand 3,644 feet, initial production 80 bbls. per hour through open tubing, total depth 3,689 feet; No. 5-A W. P. Moore, top sand 3,720 feet, initial production 103 bbls., total depth 3,739 feet; No. 14-A J. H. Silvey, top sand 3,704 feet, initial production 60 bbls. per hour through open tubing, total depth 3,723 feet; No. 3-A M. Smith, top sand 3,632 feet, initial production 64 bbls. per hour through open tubing, total depth 3,709 feet; No. 26 J. W. Turner, top sand 3,674 feet, initial production 60 bbls. per hour through open tubing, total depth 3,774 feet; No. 13-B White, top sand 3,628 feet, initital production 54 bbls. per hour through eleven-sixteenth-inch tubing choke, total depth 3,745 feet; Hunt Production Co.'s No. 3 M. M. Barksdale, top sand 3,676 feet, initial production 35 bbls. in 14 hours, total depth 3,735 feet; Jenkins Oil Corp.'s No. 14 Jobe, top sand 3,565 feet, initial production 140 bbls. per hour through open tubing, total depth 3,658 feet.

Mid-Kansas Oil & Gas Co.'s No. 72 W. T. Grimsom, top sand 3,643 feet, initial production 76 bbls. per hour through open tubing, total depth 3,647 feet. Octo Oil Co.'s No. 3-B Cox, top sand 3,630 feet, initial production 150 bbls. in two hours through open tubing, total depth 3,722 feet. Ortiz Oil Co.'s No. 7 Giles, top sand 3,660 feet, initial production 25 bbls. per hour through open tubing, total depth 3,738 feet. George B. Ray's No. 7 L. J. Pinkston, top sand 3,600 feet, initial production 233 bbls. in three hours, total depth 3,640 feet. Tysco Oil Co.'s No. 1-B Frederick, top sand 3,565 feet, initial production 20 bbls. in five hours pumping, total depth 3,635 feet. Ward Oil Co.'s No. 25 E. S. Thrash, top sand 3,759 feet, initial production 54 bbls. per hour through open tubing, total depth 3,791 feet.

Smith County

K. O. T. Oil Co.'s No. 6 S. S. Cook, top sand 3,787 feet, initial production 52 bbls. in 40 minutes through open tubing, total depth 3,789 feet. Roberts Brothers' No. 1 J. P. Lanham, top sand 3,780 feet, initial production 20 bbls. in 10 minutes through open tubing, total depth 3,781 feet.

Upshur County

Eastern Texas Petroleum Co.'s No. 1 Bradley, top sand 3,578 feet, initial production 20 bbls. in 10 minutes through open tubing, total depth 3,587 feet; No. 3 T. J. Dunbar, top sand 3,641 feet, initial production 20 bbls. per hour through open tubing, total depth 3,667 feet; No. 9 D. A. Fleet, top sand 3,661 feet, initial production 20 bbls. in 20 minutes through open tubing, total depth 3,665 feet; No. 6 D. F. Smith, top sand 3,570 feet, initial production 20 bbls. in 10 minutes through open tubing, total depth 3,580 feet; No. 25 D. F. Smith, top sand 3,580 feet, initial production 25 bbls. per hour through open tubing, total depth 3,587 feet.

Humble Oil & Refining Co.'s No. 10-B Eva O'Byrne, top sand 3,687 feet, initial production 55 bbls. per hour through open tubing, total depth 3,696 feet; No. 4 M. H. Reeves, top sand 3,658 feet, initial production 85 bbls. per hour through open tubing, total depth 3,674 feet; No. 25 Smith, top sand 3,650 feet, initial production 56 bbls. per hour through open tubing, total depth 3,665 feet. Magnolia Petroleum Co.'s No. 18 Adkins, top sand 3,735 feet, initial production 60 bbls. per hour through open tubing, total depth 3,736 feet. Simms and Stanolind Oil & Gas Co.'s No. 25-B Flewellen, top sand 3,742 feet, initial production 35 bbls. in one-half hour through open tubing, total depth 3,748 feet. Southland Oil & Royalty Co.'s No. 8 Eva O'Byrne, top sand 3,687 feet, initial production 32 bbls. in one-half hour through open tubing, total depth 3,694 feet. Wadley and Lyons and others' No. 8 Dunbar, top sand 3,612 feet, initial production 330 bbls. in one-half hour through open tubing, total depth 3,618 feet.

Wildcat Completion

Sutton and Hawkins' No. 1 F. C. Wilson, location abandoned, formerly reported as being dry and abandoned in Leon County.

West Texas Wildcats

(Continued from Page 42)

Amerada Petroleum Corp.'s No. 4-A University, top pay 3,500-3,657 feet, initial production 65 bbls. in 24 hours, total depth 3,687 feet.

Howard County

Humble Oil & Refining Co.'s No. 4 Settles, top pay 2,318-84 feet, initial production 358 bbls. in 24 hours, total depth 2,384 feet. Illinois Oil Co.'s No. 1-A Davis, top pay 2,436-2,800 feet, initial production 600 bbls., total depth 2,800 feet. Plymouth Oil Co.'s No. 11 Kloh, top pay 2,290-2,360 feet, initial production 1,144 bbls. in 24 hours, total depth 2,360 feet.

Pecos County

Cardinal Oil Co.'s No. 22-E Tippett, top pay 602-07 feet, initial production 100 bbls. in 24 hours, total depth 607 feet. Mid-Kansas Oil & Gas Co.'s No. 27 Smith-Taylor, top pay 1,130-35 feet, initial production 1,187 bbls. per hour, total depth 1,345 feet.

Ward County

California Oil Co.'s No. 5 Durgin, top pay 2,241-2,555 feet, initial production 1,085 bbls. in 24 hours, total depth 2,555 feet; No. 9 York, top pay 2,365-2,524 feet, initial production 251 bbls. in 24 hours, total depth 2,524 feet. Empire Gas & Fuel Oil Co.'s No. 1 Smith, top pay 2,580-3,092 feet, initial production 331 bbls. in 24 hours, total depth 3,092 feet. Gulf Production Co.'s No. 30 Hutchins, top pay 2,570-2,760 feet, initial production 210 bbls. in 24 hours, total depth 2,760 feet. Sid Richardson's No. 2-B W. D. Johnson, top pay 2,392-2,554 feet, initial production 293 bbls. in 24 hours, total depth 2,554 feet; No. 1 Shell-Monroe, dry and abandoned, total depth 2,664 feet.

Winkler County

Sid Richardson's No. 6 Skelly-Scarborough, top pay 2,930-3,027 feet, initial production 101 bbls. in 24 hours, total depth 3,027 feet.

COMPLETIONS IN NORTH TEXAS DISTRICT

Archer County

W. E. Maxson, Jr.'s No. 25 Green, lime 1,093-97 feet, initial production 20 bbls. swabbing per hour, total depth 1,097 feet; Manie & Featherstone's No. 7 Andrews, oil sand 979-82 feet, initial production 10 bbls., total depth 982 feet; Reese L. Hayes' No. 1 Hamilton, dry and abandoned, total depth 1,205 feet; J. C. Hamer's No. 5 Longley, oil sand 959-62 feet, initial production 300 bbls., total depth 962 feet; No. 4 Longley, dry and abandoned, total depth 991 feet; Gray Drilling Co.'s No. 8 Ferguson, dry and abandoned, total depth 674 feet; N. D. Goldsmith's No. 1 Anderson lime 1,418-30 feet, initial production 4 bbls., total depth 1,430 feet; Fain & McGaha's No. 19-C Ferguson, oil sand 646-54 feet, initial production 20 bbls, total depth 654 feet.

Bridwell Oil Co.'s No. 10-E Falls County, initial production 25 bbls. of oil and 20 bbls. of water, total depth 1,115 feet; Peckham & Medders' No. 4 Justice, lime 1,094-1,103 feet, initial production 60 bbls., total depth 1,103 feet; No. 5 Justice, oil sand 864-69 feet, initial pro-

Great Lakes Pipe Line Loop Being Used to Carry Water to Drought Areas

KANSAS CITY, Mo., Aug. 6.—The Great Lakes Pipe Line Co. is pumping from 500,000 to 750,000 gallons of fresh, clear water from Kansas City to communities as far distant as Des Moines, Iowa, through a new pipe line constructed for the carrying of gasoline, but not yet used for that purpose, company officials announced.

The line, which has a capacity of approximately 1,000,000 gallons daily, runs from the plant of the company in the Fairfax industrial district, and the water is obtained from the municipal water plant of Kansas City, Kans., at Quindaro. It passes through some of the most heat-harassed land of the Middle West and its distribution will afford relief to stock that might perish without it.

Pressure pumps constructed to force gasoline through the line have been found equally effective for water. Storage tanks with 30,000-bbl. capacity each have been built at Ridgeway and Osborne, Mo., and will be kept filled with water. The water, clarified and filtered at the Kansas City, Kans., plant, is tested daily and is as pure as can be maintained. Water also is supplied to Plattsburg and Cameron, Mo., and Osceola, Iowa.

The stockholders who have made this service possible are Continental Oil Co., Mid-Continent Petroleum Corp., Skelly Oil Co., Texas Co., Pure Oil Co., Phillips Petroleum Co., Barnsdall Corp., and Sinclair Refining Co.

duction 22 bbls., total depth 869 feet; Perkins & Cullum's No. 14-C Falls County, lime 1,152-69 feet, initial production 200 bbls., total depth 1,169 feet.; Petroleum Producers' No. 4-E Richardson, oil sand 1,232-52 feet, initial production 250 bbls., total depth 1,252 feet; Texas Co.'s No. 2 Caba, lime 1,394-1,404 feet, initial production 94 bbls., total depth 1,404 feet; No. 1 Haynes, dry and abandoned, total depth 1,410 feet; D. T. Montfort's No. 1-B Taylor, dry and abandoned, total depth 800 feet.

Cooke County

J. K. Wells' No. 1 Bezner, dry and abandoned, total depth 1,975 feet.

Jack County

Brownfield Development Co.'s No. 1 Shields, dry and abandoned, total depth 490 feet.

Montague County

Lesh & McCall's No. 1-A Lemon, dry and abandoned, total depth 2,538 feet.

Wichita County

Deep Oil & Development Co.'s No. 2 Munger, oil sand 3,864-99 feet, initial production 150 bbls. pumping, total depth 3,899 feet; Howard Russell's No. 1 Burnside, dry and abandoned, total depth 3,043 feet.

Wilbarger County

Consolidated Oil Co.'s No. 12 Waggoner, dry and abandoned, total depth 1,938 feet; Staley-Wynne's No. 10-G Waggoner, oil sand 2,430-50 feet, initial production 125 bbls., total depth 2,450 feet; W. T. Waggoner's No. 5 Waggoner, dry and abandoned, total depth 1,931 feet.

Young County

Verne C. Clopton's No. 1 Carter, dry and abandoned, total depth 1,265 feet; Gambrell and others' No. 1 Fee, oil sand 1,216-30 feet, initial production 5 bbls., total depth 1,230 feet; B. N. Honea's No. 1 Fee, oil sand 908-14 feet, initial production 12 bbls., total depth 914 feet; Regal Oil Co.'s No. 1 Atchley, dry and abandoned, total depth 1,020 feet; Sarns & Meyer's No. 1 Stringer, dry and abandoned, total depth 674 feet; Texas Co.'s No. 2 McDonald, dry and abandoned, total depth 611 feet; Dyer & Lindsey Drilling Co.'s No. 1 Allen, sandy lime 3,860-3,993 feet, initial production 20 bbls., total depth 3,993 feet; C. E. Beavers' No. 3 Montgomery, oil sand 712-22 feet, initial production 108 bbls., total depth 722 feet.

COMPLETIONS IN RANGER

Callahan County

Holmes Oil Co.'s No. 5 A. R. Kelton, dry and abandoned, total depth 815 feet. A. L. Thomas and others' No. 2 C. V. Thomas, dry and abandoned, total depth 1,250 feet. Nugren and Frazer's No. 2-B Jackson, top pay 910-16 feet, initial production 35 bbls., total depth 916 feet.

Coleman County

Ansac Oil Corp.'s No. 2 W. D. Allen, gas sand 1,114-20½ feet, initial production 5,300,000 feet of gas, total depth 1,120½ feet. H. Minnister's No. 1 Thompson, dry and abandoned, total depth 2,240 feet. Walton and others' No. 1 Shelton, dry and abandoned, total depth 2,435 feet. Ira Guffey and others' No. 3 Fowler, dry and abandoned, total depth 1,632 feet. Hines and others' No. 1 W. E. Hayrus, dry and abandoned, total depth 1,261 feet.

Eastland County

Murry and McDavid's No. 4 J. W. Clark, dry and abandoned, total depth 1,316 feet.

Palo Pinto County

Palo Pinto Oil Corp.'s No. 2 E. Brittian, gas sand 2,988-91 feet, initial production 4,000,000 feet of gas, total depth 3,053 feet, plugged back to 3,027 feet

Shackelford County

C. Atkinson's No. 1 W. G. Webb, dry and abandoned. Callahan and Oyster's No. 1 S. R. Davis, dry and abandoned. Charter Oil Co.'s No. 1-A Green, dry and abandoned, total depth 1,197 feet. J. E. Davis' No. 1 R. B. Elliott, dry and abandoned, total depth 685 feet. Lowe and Dulandy's No. 7 Alexander, top pay 854-67 feet, initial production 80 bbls., total depth 867 feet. J. L. McMurray and others' No. 4 Matthews, top pay 791-811 feet, initial production 40 bbls., total depth 811 feet. Reynolds and Richardson's No. 13 Matthews, total depth 1,230 feet, plugged back to 960 feet, initial production 2,000,000 feet of gas; No. 14-31 J. B. Matthews, top pay 760-69 feet, 970-82 feet, and 1,103 feet, shot with 10 quarts, initial production 5 bbls., total depth 1,116 feet, plugged back to 1,085 feet. Roeser & Pendleton's No. 7 Dawson, top pay 1,597-1,613 feet, initial production 50 bbls., total depth 1,616 feet. North Petroleum Co.'s No. 5 Jeter, top pay 916-24 feet, initial production 35 bbls., total depth 926 feet.

Opinion Divided on Price Outlook in the East

(Continued from Page 25)

a large part of the price advances over a period starting last year and including the fore part of this year. The lower prices apparently have not stimulated buying to any great extent. It is predicted that these prices, however, will serve to curtail output and this is the development most needed at this time, according to those in daily touch with the market. It is said that the higher prices increased production to the point where there was no possibility of the available domestic and export markets absorbing the material available regardless of price.

Among the buyers there are predictions that prices on wax will also decline. So far the recent declines have been largely confined to the crude scale material. The 124-126 crude scale is now quoted in this market from 3.1 to 3.2 for domestic and 2.95 to 3 cents per pound for export movement.

NEW SOCONY VACCUM SHIP

NEW YORK, Aug. 4.—What is said to be the largest all welded vessel in the American merchant marine was launched Friday by the Socony Vacuum Oil Co., Inc., at the Staten Island plant of the United Dry Docks, Inc. The vessel is the third to be built for the Socony-Vacuum Co. for service carrying fuel oil and other products along the coast and inland waterways.

The new ship is 260 feet long, 40 feet beam and 14 feet deep and has a gross tonnage of 1,242. Her rated capacity is 712,500 gallons. The vessel is powered by two Diesel engines of 750 brake horsepower driving twin screws. She carries a crew of 18 men. The welding is said to decrease weight of the vessel with additional strength. In the construction of the ship 105,000 feet of electric welding serves the purpose of about 250,000 steel rivets.

Miss Elizabeth M. Sheets, daughter of Harold F. Sheets, a director of the company, formally launched the ship in the presence of a number of company executives.

Congressional Hearings to Begin in September

(Continued from Page 9)

which will cover the entire country. Comparisons will also be made between electric power production and gas energy production.

Drilling Code

Through a clerical error, an incorrect draft of the section with respect to State Drilling Practices Committees under the subheading "The 48-Hour Week" was released. The following is a complete and correct substitute for this section:

"No employe shall work more than 48 hours in any seven-day period, nor more than eight hours in any one day. It is contemplated that employes on continuous operations normally may work not more than six hours per day nor more than a total of 42 hours in the seven-day period. However, if conditions are such as to make the 'staggering of crews' practicable, employes may work eight-hour days, but not more than six eight-hour days or a total of 48 hours each seven-day period.

"On either basis the employe works, all paid hours accumulated toward the maximum of 936 hours for the period. If and when this maximum is reached, then employe must 'lay off' until the end of that period. Eight hours per day is the limit permitted by the code. In circumstances where relief is impractical this limit may be exceeded provided that the employe works not more than 16 hours on any two consecutive days.

DRILLING CONTRACTORS ELECT

DALLAS, Tex., Aug. 4.—Eight new directors were named by the Texas-Louisiana-New Mexico Drilling Contractors Association at a board meeting here: Panhandle, George Cree of Pampa and Ed Moran of Tulsa; North Texas, I. H. Mitchell of Wichita Falls; West Texas, M. B. Stanton of Big Spring; East Texas and Louisiana, A. F. Lanier of Shreveport; Southwest Texas, Edwin M. Jones of San Antonio, and Gulf Coast, A. W. Crosby and Harry Edwards of Houston.

The other directors include M. J. Delaney, T. S. Schroeder, John B. Black, H. W. Bass, Warren L. Todd and J. Alvin Gardner of Dallas; A. R. Dillard of Wichita Falls, J. M. Loffland and A. H. Rowan of Fort Worth, A. T. McDonald and E. A. Showers of Houston, A. A. Buchanan of San Antonio, and P. R. Bonds of Longview.

Large power installed in Oklahoma, Naval Reserve, Osage County

Strike Cost a Million but Consumer Protected

Efforts of the petroleum industry to keep retailers supplied with gasoline during the 10-week period of the Pacific Coast Longshoremen's strike cost the industry more than $1,000,000, while prices to retailers and consumers were maintained at pre-strike levels. Deliveries were refused to retailers who increased their prices to the public.

These facts were revealed in a letter written by E. B. McDaniel, president of the Oregon State Motor Association, to the Oregon Petroleum Industries Committe. Said Mr. McDaniel: "We are cognizant of the exceptional efforts which were necessary to meet the demands of motorists. . . . We are also aware that meeting the emergency through tank car delivery and maneuvering of gasoline stocks probably increased your costs in excess of $1,000,000 during the 10 weeks the strike was in effect.

"So far as we are able to ascertain, the petroleum industry maintained prices in effect at the beginning of the strike and despite the increased cost, you did not raise prices to the retailer. We are aware also that in several instances, at least, you further protected the motorists by delivering gasoline only to those stations which did not increase prices.

"As president of the Oregon State Motor Association, I wish to express the appreciation of the motorists of the state, for your unselfish activities during the period of this emergency."

During the strike a large number of unidentified trucks made deliveries to Portland service stations, and the Oregon Petroleum Industries Committee co-operated with the state auditor's office by maintaining a check of all arterial highways to prevent bootlegging and tax evasion. The committee is also aiding the state in its campaign against false claims for gasoline tax refunds. Approximately 2,500 claims for refunds are made monthly, and it is believed that many of these are fraudulent.

LETHBRIDGE GAS SYSTEM

LETHBRIDGE, Alberta, Aug. 4.—Improvements this year to the Lethbridge gas system of the Canadian Western Natural Gas, Light, Heat & Power Co., include the laying of 2,200 feet of 6-inch low pressure line to connect the north and south sections of the city. This work has been completed. A shipment of 16-inch pipe arrived recently from Ohio which will be used to replace some 2 miles of the main transmission line from the river to Diamond City.

H. N. URI DIES

Hubert N. (Turk) Uri, 39 years old, well known geologist of Okmulgee, Okla., died suddenly after a morning of golf. A graduate of the school of geology at the University of Oklahoma, he had been a resident of Okmulgee since the age of 15. On completing his college work he formed a partnership with Fae Weimer, serving as geologists for the old Indiahoma Oil Co. The firm of Weimer & Uri has operated independently since.

GAS COMPANY INCORPORATED

CARDSTON, Alberta, Aug. 4.—The Cardston Gas & Development Co., Ltd., has been incorporated under Alberta charter at Cardston. The company has secured a franchise to supply natural gas to Cardston from a field to be developed near the town.

Pipe Line Construction

LINE TO BOSCO, LA.

HOUSTON, Tex., Aug. 6.—The Pure Oil Co. will start laying in the near future a pipe line from the Bosco Field, 32 miles southwest of Gueydan. Surveying of the route was completed last week. It will be an 8-inch line and will connect at the Gueydan Field with Pure's 12-mile outlet to the Mermentau River.

ROCKY MOUNTAIN FIELD

Estimated daily average production for week ending August 4, 1934:

WYOMING	
Salt Creek	17,590
Big Muddy	1,730
Badger Basin	40
Byron	550
Dallas Derby	800
Black Mountain	550
Dutton Creek	80
Elk Basin	570
Ferris	20
Frannie	1,430
Garland	1,670
Grass Creek	400
Greybull	10
Hamilton Dome	980
Hudson	330
LaBarge	1,700
Lance Creek	170
Lost Soldier	1,530
Mule Creek	shut in
Midway	110
Notches	shut in
Oregon Basin	2,770
Osage	1,000
Pilot Butte	10
Rex Lake	30
Rock River	1,510
South Casper	620
Poison Spider	240
Teapot	20
Total Wyoming	36,270
MONTANA	
Buckley-Border	350
Cat Creek	590
Cut Bank	3,110
Dry Creek	shut in
Kevin-Sunburst	4,610
Lake Basin	50
Pondera	710
Total Montana	9,320
COLORADO	
Florence	200
Fort Collins and Wellington	540
Iles Dome	2,210
Moffat	460
Orchard	110
Rangely	90
Tow Creek	210
Total Colorado	3,820
NEW MEXICO	
Artesia	510
Cooper area	390
Empire area	110
Eunice area	3,100
Getty Pool	0
Hobbs	36,700
Hogback	200
Hospah	0
Jal	2,860
Lea area	1,340
Jackson	1,070
Maljamar	290
Rattlesnake	710
Table Mesa	90
Total New Mexico	46,870
Total Rocky Mountain region	96,280

East Central Texas Wildcats

(Continued from Page 43)

Smith and McCras' No. 1 Tipps, 350 ft. E of W line and 700 ft. N of S line of lease and survey, J. B. Heath Sur.
Set surface csg.

Southern Gulf Oil Co.'s No. 1 Joe Bailey, center 164-ac. tract, 4 miles NE of Ponta, L. R. Rhodes Sur., Abstract No. 724.
Drlg. 3,580 ft.

T. J. Wood et al's No. 2 New Birmingham Dev. Co., 660 ft. W and 330 ft. S of No. 1, Levi Jordan Sur.
Abnd.

T. J. Wood et al's No. 3 New Birmingham Dev. Co., 660 ft. N and 330 ft. E of No. 1, Levi Jordan Sur.
Moving in.

Zilkey and McCulloch's No. 1 Bradford, 2,500 ft. from most southerly S line and 771 ft. from E line of survey, 4 miles E of Rusk, J. Armendaris Sur.
S.D. 3,930 ft.

FANNIN COUNTY

L. Kean et al's No. 1 L. M. Boyd, 900 ft. from E line and 200 ft. from N line of survey, W. Hunt Sur.
S.D. 2,370 ft.; prep. to test.

FRANKLIN COUNTY

Humble Oil & Ref. Co.'s No. 1 Merchants & Traders Bank, 1,000 ft. from S line and 1,500 ft. from E line of Fannie Davis tract, 5 miles SE of Talco, J. Askey Sur.
Drlg. 3,150 ft.

FREESTONE COUNTY

American Liberty Oil Co.'s No. 1 Trinity Farm Security Co., center of N and S lines and 466 ft. from E line of survey, J. B. Bonham Sur.
Coring 4,056 ft.

Burris' No. 1 R. J. Johnson, NE cor. of a 95.5-ac. tract, W. M. C. Jones Sur.
Location.

Clyde Creighton's No. 1 Holly Bros., 854 ft. from W and center N and S lines of lease, A.B.&M. Sur.
T.D. 5,711 ft.

Gholson et al's No. 1 B. M. and C. H. Watson, 1,450 varas from N line and 1,150 varas from W line of survey, 6 miles NE of Fairfield, R. D. Price Sur.
Location.

Trinity Farm Co.'s No. 1 N. R. Stewart, 1,366 ft. SW from NE line and 933 ft. SE from NW line of 1,920-ac. tract, R. M. Williamson Sur.
S.W. sand 4,040 ft.

J. E. Wilburn's No. 1 S. McShan, 4,000 ft. from MWL and 5,000 ft. from NEL of survey, G. Dias Sur.
Set surface csg.

HENDERSON COUNTY

Big Bad Wolf Oil Co.'s No. 1 McCreary, 1,800 ft. from W line and 330 ft. from S line of survey, 6 miles S of Malakoff, W. H. Irvin Sur.
Derrick.

Campbell and Chamberlain's No. 1 R. Ansley, 1,724 ft. W and 300 ft. S of SE cor. of M. Matthews Sur., N. H. T. Thompson Sur.
Drlg. 800 ft.

Crosby and Pulp's No. 1 M. T. Dobbs, NW cor. of east Dobbs 100-ac. tract, 4 miles E of Malakoff and S of railroad, George Aldrick Sur.
Drlg. plug.

HOPKINS COUNTY

D. A. Hale et al's No. 1 L. M. Hall, 200 ft. from N and E lines of 70-ac. tract, 1 mile SE of Miller Grove, A. Caro Sur.
S.D. 640 ft.

HUNT COUNTY

L. G. Priest's No. 1 Amelia Barnett, 500 ft. from W line, 200 ft. from S line of J. C. Hamer Sur.
Rig up.

KAUFMAN COUNTY

W. J. Lewis et al's No. 1 D. Clark, 420 ft. from S line and 600 ft. from E line of Sur., 6¼ miles NW of Elmo.
S.D. 500 ft.

LAMAR COUNTY

Cole et al's (formerly Optometrist Oil Club) No. 1 J. M. McFaddin, 450 ft. from S and W lines of E 25-ac. tract, 10 miles NW of Paris, Joseph Dick Sur.
S.D. 2,506 ft.

LEON COUNTY

Kellough and Tucker's No. 1 G. B. Young, 330 ft. from S line and 330 ft. from W line of 100-ac. tract, 4 miles SE of Long Lake, J. M. Boone Sur.
Drlg. 3,390 ft.

Normangee Corp.'s (W. C. Battaile et al) No. 1 B. H. Henry, 1,850 ft. from E line and 2,700 ft. from N line of survey, Robert Rogers League, 2¼ miles NE of Normangee.
Spudded and S.D.

LIMESTONE COUNTY

Foster's No. 1 C. O. Wright, 200 ft. N of S line, 125 ft. W of E line of 2-ac. tract, 2 miles S of Wortham, Sarah McAnulty Sur.
Moving in material.

Peyton Bros.' No. 1 Stubenrach, 870 ft. NW from SE line, 1,170 ft. SW of NE line of 346.89-ac. tract, F. Varela Sur.
Drlg. 3,164 ft.

Schultz' No. 1 Roy Ward, NE cor. of 72.3-ac. tract, 5 miles W of Mexia Field, Harrison York Sur.
Rebuilding rig.

Ernest Thompson et al's (formerly C. C. Curtis) No. 1 Emma Daniels, 150 ft. from S and W lines of 41.5-ac. tract, Pedro Varela Sur.
Working over old well; old T.D. 2,950 ft.

MORRIS COUNTY

Simpson et al's No. 1 Staggers, 800 ft. from S line of survey and 150 ft. from W line of lease, J. B. Nelson Sur.
Rig collapsed; T.D. 3,820 ft.

NACOGDOCHES COUNTY

Murray Oil Co.'s No. 1 C. B. Watkins, 150 ft. from N line and 330 ft. from NW lines of 160-ac. tract, 3 miles S of Caro, H. Y. Bailey Sur.
T.D. 2,785 ft.

J. W. Rich and others' No. 1-A R. W. Haslewood, 5,450 ft. from S line and 2,800 ft. from W line of survey, 50 ft. N of No. 1, 15 miles SW of Nacogdoches Ewing Sur.
S.D. for surface csg.

NAVARRO COUNTY

Bennett Brothers' No. 1 T. E. Stewart, 150 ft. from NE L of lease, 10 miles SW of Corsicana, Wm. R. Bowen Sur.
Set surface csg. 1,170 ft.

W. J. Keeling et al's No. 1 J. F. Rushing, 484 ft. from N line and 150 ft. from W line of 134-ac. tract, 6 miles SW of Richardson, Henry Ford Sur.
Drlg. 2,240 ft.

McCullough et al's No. 1 C. Berry, 330 ft. from SE cor. of 35-ac. tract, 1 mile W of Dawson, William Moss Sur.
Drlg. 625 ft.

Wheelock and Collins' No. 1 I. N. Cerf, 375 ft. from N line of lease and 1,050 ft. from W line of lease, James Smith Sur. No. 726.
Reaming 5,068 ft.

RAINES COUNTY

Wadley et al's No. 1 P. F. Jones, 400 ft. out of SW cor. of 23-ac. tract, 2½ miles S of Alba, B.B.B.&C. Sur.
T.D. 4,730 ft.

RED RIVER COUNTY

Cornell and Spear's No. 1 E. H. Thompson, 664 ft. from S and 1,062 ft. from W of NE cor. of 334-ac. tract, E. Smith Sur.
S.D. 1,072 ft.

RUSK COUNTY

Headwater Oil Co.'s No. 1 F. L. Gary, 375 ft. N of S line and center of E and W lines of 200-ac. tract, 8 miles E and S of Henderson, Jose A. Mora Sur.
Moving in material.

George Hudson et al's No. 3 Jeff Phillips, 150 ft. from N line of survey and 700 ft. from W line of 100-ac. tract, 4 miles SE of Minden, N. Villaris Sur.
Swabbed dry through tubing; T.D. 3,672 ft.

UPSHUR COUNTY

Ben G. Barnett et al's No. 1 W. S. Jones, 300 ft. out of SW cor. of 100-ac. tract, 1¼ miles NW of Jamestown, James N. Dunn Sur.
Bailed S.W. 3,700 ft.

Virgil Hodges et al's No. 1 J. M. Floyd, 330 ft. from NE cor. of 126-ac. tract, 4 miles N of Gladewater, Railroad Sur.
S.D. 3,200 ft.

Lanier and Moore's No. 1 Vaughan, 330 ft. from S line and 990 ft. from W line of 100-ac. tract, 3 miles NW of Big Sandy, P. W. Standifer Sur.
S.D. 1,942 ft.

Joe Papadika's No. 2 Tourney, 100 ft. due W of No. 1.
T.D. 3,050 ft.

VAN ZANDT COUNTY

W. E. Brown's No. 1 Bank of Edgewood, 560 varas from SW cor. of H. M. Lead Sur., M. B. Lout Sur.
Rebuilding derrick.

Van Zandt Synd.'s No. 1 C. S. Coker, 150 ft. out of SW cor. 55-ac. tract, William Daniel Sur.
S.D. 1,208 ft.

Gillum and Allen et al's No. 1 A. T. Bass, 150 ft. from W line and 150 ft. from N line of 10-ac. tract, William Hart Sur.
Fishing 4,267 ft.

Isaac et al's No. 1 C. F. Darrell, 330 ft. from S and W lines of 55-ac. tract, C. E. River Sur.
Drlg. 1,460 ft.

Markin & Evens' No. 1 L. M. Palmer, 350 ft. E of W line and 150 ft. N of S line of 69.8-ac. tract, one-tenth mile E of Pruitt, Nacogdoches County School Land Sur.
Swabbing dry 1,290 ft.

Miller et al's No. 1 J. M. Palmer, 150 ft. from S and E lines of 69-ac. tract, Nacogdoches County School Land Sur.
T.D. 225 ft.

Peden and Olson's No. 1 J. M. Palmer, 200 S of No. 2 and 140 ft. from W line of tract, J. Goodman Sur.
S.D. 1,214 ft.

Pure Oil Co.'s No. 4 T. J. Wallace, 760 ft. N of S line and 176 ft. E of W line of T. J. Wallace 34.7-ac. tract.
Drlg. 2,350 ft.

Pure Oil Co.'s No. 3 A. D. Preston, 200 ft. S of N line and 200 ft. NE of SW line of A. D. Preston 9-ac. tract, Mund Gross Sur.
Flowed 45 bbls. first 24 hrs.

Pure Oil Co.'s No. 3 Frank Blackstock, 720 ft. S of N line and 665 ft. E of W line of Frank Blackstock 40-ac. tract, John Walling Sur.
Drlg. 1,855 ft.

Pure Oil Co.'s No. 10 N. E. Clark, 934 ft. E of W line, 1,058 ft. N of S line of N. E. Clark and J. R. Houston 94.5-ac. tract, J. Prado Sur.
Location.

Pure Oil Co.'s No. 10 W. T. Jarmon, 650 ft. S of N line of lease and 1,085 ft. W of E line of W. T. Jarmon 132.8-ac. tract in Nacogdoches County School Land Sur.
Running csg. 2,917 ft.

Pure Oil Co.'s No. 3 W. F. Swain, 700 ft. S of N line, 200 ft. E of W line, John Walling Sur.
Location.

Wheelock et al's No. 1 Cade, 150 ft. from S line and 150 ft. from E line of 20-ac. tract, Nacogdoches County School Land Sur.
S.D. 1,265 ft.

WOOD COUNTY

Alex Snyder et al's No. 1 T. Holmes, 200 ft. out of NE cor. of 122-ac. tract, 1½ miles SE of Hawkins, A. N. McKnight Sur. 399.
S.D. 4,000 ft.

West Texas Wildcats

(Continued from Page 42)

Landreth Prod. Co.'s No. 1-C T.P. Land Trust, 440 ft. N and 440 ft. W of Sec. 11, Blk. 43, Twp. 1s, T.&P. Sur.
Rig up standard tools. T. D. 3,950 ft.

Landreth Prod. Co.'s No. 2 O. B. Holt, 660 ft. from S and E lines of Sec. 15, Blk. 43, Twp. 1n, T.&P. Sur.
Rig up.

Landreth Prod. Co.'s No. 1 Clarence Scharbauer, 660 ft. from S and E lines of Sec. 20, Blk. 44, Twp. 1n, T.&P. Sur.
S.D. 3,765 ft.

Moran Drlg. Co.'s No. 1 Smith, 330 ft. from N line, 330 ft. from W line of Sec. 12, Blk. 43, Twp. 1s, T.&P. Sur.
C.O.; T.D. 4,425 ft.

Phillips Pet. Co.'s No. 1 Kloh, 440 ft. from EL and 440 ft. from SL, Sec. 3, Blk. 43, Twp. 1s, T.&P. Sur.
Cellar.

Shell Pet. Pet. Corp.'s No. 3 Jones, 2,310 ft. from SL, Sec. 6, Blk. 44, Twp. 3s, T.&P. Sur.
Rig.

Skelly Oil Co.'s No. 5-A University, 660 ft. from N and 1,980 ft. from E, Sec. 1, Blk. 35, University Sur.
Moving in.

Stanolind Oil & Gas Co.'s No. 7 J. M. Cowden, 440 ft. from S line and 2,312 ft. from W line, Sec. 34, Blk. 43, Twp. 1s, T.&P. Sur.
Bldg. derrick.

Stanolind Oil & Gas Co.'s No. 8 J. M. Cowden, 440 ft. from S line and 440 ft. from W line, Sec. 34, Blk. 43, Twp. 1n.
Cellar and pits.

Stanolind Oil & Gas Co.'s No. 9 J. M. Cowden, 440 ft. from S line and 2,300 ft. from E line, Sec. 34, Blk. 43, Twp. 1n, T.&P. Sur.
Location.

Stanolind Oil & Gas Co.'s No. 4 E. F. Cowden, 1,900 ft. from S line and 660 ft. from W line, Sec. 36, Blk. 43, Twp. 1s, T.&P. Sur.
Drlg. 450 ft.

Sun Oil Co.'s No. 1 Wight, 2,300 ft. from S line, 440 ft. from W line, Sec. 3, Blk. 43, Twp. 1s, T.&P. Sur.
Derrick.

Texas Co.'s No. 10 W. E. Connell, 2,310 ft. from E line and 330 ft. from the S line of Sec. 1, Blk B-16, P.S.L. Sur.
S.D. 2,048 ft.

Fred Turner's No. 2-A Addis, 2,310 ft. from N and 440 ft. from E of Sec. 35, Blk. 43, Twp. 2s, T.&P. Sur.
Cellar.

FISHER COUNTY

E. T. Campbell et al's No. 1 W. R. Bishop, 570 ft. from S and 150 ft. from E of NW cor. of Sec. 18, Blk. 21, T.&P. Sur.
Rig up.

Condor Pet. Co.'s No. 2 Wilson, 660 ft. from N and 2,310 ft. from W line of Sec. 4, Blk. R. W. E. Richardson Sur.
Drlg. 2,355 ft.

Stanolind Oil & Gas Co.'s No. 5 Steele, 1,170 ft. from S and 990 ft. from W line of Sec. 210, Blk. 1, B.B.B.&C. Sur.
T.D. 3,187 ft. Pumped 10 bbls. of salt water per hour. Will plug back.

Texas Co.'s No. 2-B Teagarden, 990 ft. from S and 330 ft. E of NW cor. of S half of Sec. 9, Blk. 5, W. E. Richardson Sur.
Drlg. 1,720 ft.

Texas Co.'s No. 1 First National Bank of Rotan, 330 ft. N and E of the NW cor. of Sec. 210, B.B.B.&C. Sur.
Drlg. 1,650 ft.

GLASSCOCK COUNTY

Continental Oil Co.'s No. 3 Hart Phillips, 1,050 ft. from N and 660 ft. from W, Sec. 24, Blk. 34, Twp. 2s, T.&P. Sur.
Drlg. 1,415 ft.

Steve Currie et al's No. 1 Underwood, 660 ft. from N line and 660 ft. from E line of Sec. 24, Blk. 3, Twp. 4s, T.&P. Sur.
Drlg. 1,820 ft.

John I. Moore et al's No. 1 J. S. McDowell, 1,980 ft. from N line and 660 ft. from E line of Sec. 22, Blk. 34, Twp. 2s, T.&P. Sur.
Drlg. 3,720 ft.

John I. Moore's No. 1 Hubbard, 660 ft. from E line, 660 ft. from S line, Sec. 16, Blk. 34, Twp. 2s, T.&P. Sur.
Drlg. 950 ft.

Luce & Pickens' No. 1 Lee, 330 ft. from N and 330 ft. from W, Sec. 30, Blk. 33, Twp. 2s, T.&P. Sur.
S.D. 2,100 ft.

Shell Pet. Corp.'s No. 4 Hart Phillips, 2,310 ft. from N line and 660 ft. from E line, Sec. 23, Blk. 33, Twp. 2s, T.&P. Sur.
Location.

Simms Oil Co.'s No. 1 McDowell, 1,650 ft. from N line, 2,310 ft. from W line, Sec. 19, Blk. 33, Twp. 2s, T.&P. Sur.
Spudded.

Tribal Oil Co.'s No. 5 M. M. Edwards, 330 ft. from S line and 990 ft. from the W line of Sec. 16, Blk. 33, Twp. 2s, T.&P. Sur.
T.D. 2,402 ft.; P.B. to 2,320 ft.; swbd. 95 bbls.

HOWARD COUNTY

Continental Oil Co.'s No. 10 Settles, 330 ft. from N line, 1,650 ft. from W line, Sec. 135, Blk. 29, W.&N.W. Sur.
Rig up.

Eastland Oil Co.'s No. 1 Chalk, 2,310 ft. from S and 1,980 ft. from W, Sec. 125, Blk. 29, W.&N.W. Sur.
T.D. 1,558 ft. Showing oil and gas.

Fuglarr & Patterson's No. 1 Hyman, 330 ft. from S line and 330 ft. from W line of Sec. 89, Blk. 29, W.&N.W. Sur.
Drlg. 900 ft.

California Oil Co.'s No. 1 A. M. Bell, 465 ft. from W line and 1,915 ft. from E line of Sec. 12, Blk. 30, Twp. 1s, T.&P. Sur.
Drlg. 2,525 ft.

California Oil Co.'s No. 1 Dodge, 1,915 ft. from E line and 465 ft. from S line of Sec. 1, Blk. 30, T.&P. Sur.
Pulling pipe; T.D. 2,400 ft.

Continental Oil Co.'s No. 11 Settles, 330 ft. from NL, 2,310 ft. from WL, Sec. 33, Blk. 29, W.&N.W. Sur.
Cellar.

Eastland Oil Co.'s No. 2 Chalk 2,310 ft. from SL, 990 ft. from WL, Sec. 125, Blk. 29, W.&N.W. Sur.
Cellar.

Humble Oil & Ref. Co.'s No. 5 Settles, 2,310 ft. from EL, 330 ft. from SL, Sec. 132, Blk 29, N.&N.W. Sur.
Set surface csg.

L. C. Harrison et al's No. 2 Texas Land & Mortgage Co., 2,310 ft. from E line and 330 ft. from the S line of Sec. 4, Blk. 30, Twp. 1s, T.&P. Sur.
Derrick.

Illinois Oil Co.'s No. 1 Logan, 990 ft. from NL, 2,310 ft. from EL, Sec. 2, Blk, 30, Twp. 1s, T.&P. Sur.
Location.

Illinois Oil Co.'s No. 1-B Davis, 2,310 ft. from N line and 2,310 ft. from W line of Sec. 2, Blk. 4, Twp. 1s, T.&P. Sur.
Drlg. 2,727 ft.

Iron Mountain Oil Co.'s No. 1 Read, 330 ft. from E line, 330 ft. from S line, Sec. 46, Blk. 30, Twp. 1n, T.&P. Sur.
Rig up.

Merrick & Lamb's No. 13 Clay, 990 ft. from EL, 2,310 ft. from SL, Sec. 126, Blk. 29, W.&N.W. Sur.
Location.

Permian Pacific Pet. Co.'s No. 1 Capps, 330 ft. from SW cor. of Sec. 17, Blk. 29, Twp. 1n, T.&P. Sur.
Location.

Phillips Pet. Co.'s No. 1 Davis, 990 ft. from E and 2,310 ft. from S line, Blk. 30, Twp. 1s, T.&P. Sur.
Drlg. 605 ft.

IRION COUNTY

S. E. Colgin's No. 1 Tankersley, 550 ft. from E of river and 150 ft. from S line of Sec. 733, H. J. Voelker Sur.
S.D. 1,386 ft.

Melrose Oil Co.'s No. 1 J. D. Sugg, 1,700 ft. from the E line and 308 ft. from the S line of Sec. 25, Blk. 2, H.&T.C. Sur.
Spudded and S.D.

Williams-Short's No. 1 Gentry, 2,200 ft. from N line and 2,080 ft. from W line of Sec. 1, Blk. 2, H.&T.C. Sur.
S.D. 1,460 ft.

JONES COUNTY

Clifton & Braselton et al's No. 1 Cassey, 200 ft. from N and W lines of SE cor. of Sec. 15, Blk. 15, T.&P. Sur.
S.D. 800 ft.

Guthrie & Lancaster's No. 1-B Campbell, 330 ft. from N and 2,276 ft. from E line of Sec. 15, Blk. 19, T.&P. Sur.
S.D. 1,020 ft.

Southern Oil Corp.'s No. 2 Williams, 330 ft. from S and W line of Sec. 17, Blk. 19, T.&P. Sur.
T.D. 2,545 ft; treated with acid.

LOVING COUNTY

R. L. Allen's No. 2 fee, 4,290 ft. from NE line, 990 ft. from SE line, Sec. 32, Blk. 33, H.&T.C. Sur.
Location.

R. L. Allen's No. 3 fee, 4,290 ft. from NE line, 990 ft. from NW line, Sec. 32, Blk. 33, H.&T.C. Sur.
Location.

R. L. Allen's No. 4 fee, 4,200 ft. from NE line, 330 ft. from NW line, Sec. 32, Blk. 33, H.&T.C. Sur.
Location.

Eppenauer Drlg. Co.'s No. 2 Hammill & Ellis, 410 ft. from NW and 796 ft. from NE lines of Sec. 3, Blk. 1, W.&N.W. Sur.
Cellar.

D. C. Evans' No. 1 W. D. Johnson, 3,310 ft. from N and 1,650 ft. from W, Sec. 13, Blk. 57, Twp. 1, T.&P. Sur.
S.D. 411 ft.

H. W. Martin's No. 4 Wheat, Ramsey, 990 ft. from SE and SW lines of Sec. 33, Blk. 1, W.&N.W. Sur.
Drlg. 3,790 ft.

J. F. Slack's No. 1 Covey, 2,310 ft. from NE line and 330 ft. from SE line of Sec. 3, Blk. 2, W.&N.W. Sur.
T.D. 3,230 ft.

PECOS COUNTY

California Oil Co.'s No. 7 Smith, Lease No. 1 375 ft. from N and 1,094 ft. from E, Sec 37, Blk. 194, G.C.&S.F. Sur.
S.D. 1,424 ft.

California Oil Co.'s No. 24 Hates, 160 ft. from E line and 20 ft. from S line, Sec. 34, Blk. 194, G.C.&S.F. Sur.
Location.

Cardinal Oil Co.'s No. 17-E Tippett, 150 ft. from E line of W half and 730 ft. from N of No. 5-B, Sec. 40, Blk. 194, G.C.&S.F Sur.
Waiting on orders; T.D. 481 ft.

Humble Oil & Ref. Co.'s No. 2 White & Baker, 1,320 ft. from N line and 1,320 ft. from E line, Sec. 4, Blk. 179, T.C.R.R. Sur.
Location for Permian test.

Illinois Oil Co.'s No. 2 University, 330 ft from E line and 960 ft. from S line, Sec 31, Blk. 24, University Land Sur.
Drlg. 1,300 ft.

C. S. Messenger's No. 2 Rand Jones, 1,935 ft from S line and 1,013 ft. from W line of Sec. 5, Blk. 9, H.&G.N. Sur.
Drlg. 1,215 ft.

Mid-Kansas Oil & Gas Co.'s No. 18 Smith-Taylor, 1,296 ft. from S line, 1,290 ft. from W line, Sec. 33, Blk. 194, G.C.&S.F. Sur.
Location.

Mid-Kansas Oil & Gas Co.'s No. 24 Smith-Taylor, 350 ft. W of S half of Turner tract No. 1, Sec. 33, Blk. 194, G.C.&S.F. Sur.
Road.

Mid-Kansas Oil & Gas Co.'s No. 25 Smith-Taylor, 344 ft. W of SE cor. of S half of Turner Tract No. 1, Sec. 33.
S.D. 750 ft.

Mid-Kansas Oil & Gas Co.'s No. 26 Smith-Taylor, 395 ft. S and 344 ft. E of SE cor. of S half of Tract No. 1.
Cellar.

Mid-Kansas Oil & Gas Co.'s No. 1 Turner, 350 ft. from N line and 350 ft. from W line of Turner Sur. No. 1.
S.D. 590 ft.

Mid-Kansas Oil & Gas Co.'s No. 12-H Yates, 408 ft. S of N line of Sec. 32 and 334 ft. W of SE cor. of S half of Tract No. 1.
Location.

Mid-Kansas Oil & Gas Co.'s No. 13-H Yates, 408 ft. S of N line of Sec. 32 and 344 ft. E of SE cor. of S half of Tract No. 1.
Location.

Mid-Kansas Oil & Gas Co.'s No. 38-A Yates, 250 ft. E and 205 ft. S from the NE cor. of Turner Tract No. 3 in Sec. 34½, I. G. Yates Sur.
Location.

Mid-Kansas Oil & Gas Co.'s No. 39-A Yates, 150 ft. N and 350 ft. W of the NW cor. of Turner tract No. 4, in Sec. 34½, I. G. Yates Sur.
Cellar.

Mid-Kansas Oil & Gas Co.'s No. 40-A Yates, 344 ft. from E line and 395 ft. from N of SE cor. of E half of Turner Tract No. 1.
S.D. 680 ft.

Mid-Kansas Oil & Gas Co.'s No. 43-A Yates, 990 ft. from N line and 1,356 ft. from W. line, Sec. 34½, I. G. Yates Sur.
Location.

Shell Pet. Corp.'s No. 2-D University, 2,310 ft. from S line, 660 ft. from W line, Sec. 32, Blk. 16, University Sur.
Drlg. 710 ft.

Tex-Mex Pet. Co.'s No. 1 Netterville, 5,610 ft. from S and 330 ft. from W of Sec. 59, Blk. 8, H.&G.N. Sur.
T.D. 2,102 ft.

Trans-Texas Oil Co.'s No. 1 Caldwell, 330 ft. from E line and 330 ft. from S line of Sec. 37, Blk. 40, Twp. 9, T.&P. Sur.
S.D. 320 ft.

REAGAN COUNTY

Big Lake Oil Co.'s No. 15-C University, Sec. 12, Blk. 2.
Drlg. 7,609 ft.

E. P. Kirschner and White's No. 1 W. A. White and McIntosh, 720 ft. from E and 800 ft. from N of Sec. 1,223, E.L.R.R. Sur.
S.D. 2,165 ft.

Skelly Oil Co. et al's No. 1-D H. S. Grayson, 1,980 ft. from N line and 660 ft. from W line of Sec. 33, Blk. 3, University Land Sur.
Rig up to spud.

REEVES COUNTY

J. E. Cunningham's No. 1 Altman, 2,310 ft. from N line and 1,980 ft. from E line of Sec. 1, C. C. Wyatt Sur.
Spudded and S.D.

Grisham & Hunter Corp.'s No. 1-A fee, 1,320 ft. from N line and 1,470 ft. from E line, Sec. 1, Blk. 50, Twp. 8, T.&P. Sur.
S.D. 3,777 ft.

Hugo Freels' No. 1 B. Greenman, 330 ft. from NE line and 231 ft. from SE line of Sec. 31, Blk. 2, H.&G.N. Sur.
Shot 220 qts. from 3,778-3,990 ft.; no results; S.D.; T.D. 3,988 ft.

RUNNELS COUNTY

Agnew & Sons' No. 2 Fowler, 1,165 ft. from S and 150 ft. from W of NE cor. of Blk. 38, N. Travis Sur.
Tested 20 bbls. of oil and 20 bbls. of salt water in 3 days.

Agnew and Currie's No. 1 H. E. Wade, 2,640 ft. from N line and 330 ft. from E line of Sec. 24, Domingo Diaz Sur. No. 533.
Prepare to start up; T.D. 33 ft.

Daniel et al's No. 1 W. F. James, 330 ft. from N and W lines of Subdiv. No. 30, Norvell Travis Sur.
Drlg. 1,410 ft.

Melrose Oil Co.'s No. 1 L. P. Woods, 150 ft. from NE lines and 2,475 ft. from W line of survey, Willett Holmes Sur. No. 100.
S.D. 1,430 ft.

F. D. Williams' No. 1 J. L. Elkins, 2,235 ft. from E and 1,300 ft. N of SW cor. of Blk. 12, but in Blk. 13, N. Travis Sur. No. 538.
S.D. 1,410 ft.

SCHLEICHER COUNTY

John M. Cooper et al's No. 1 Bert Page, 1,290 ft. from N line, 1,470 ft. from W line of Sec. 40, Blk. L, G.H.&S.A. Sur. (old well being drilled deeper).
To use acid; T.D. 5,635 ft.

Humble Oil & Ref. Co.'s No. 1 Ike Honig, 2,640 ft. from N line and 2,650 ft. from E line of Sec. 38, Blk. M, G.H.&S.A. Sur.
Rig up rotary; T.D. 690 ft.

SCURRY COUNTY

Paul C. Teas' No. 1 Chapman, 660 ft. from S and 660 ft. from W, Sec. 100, Blk. 9, H.&T.C. Sur.
Swabbed 1¼ bbls. per hour; T.D. 1,734 ft.

TERRELL COUNTY

W. A. Sudderth's No. 1 Phelps, 2,157 ft. from N line and 2,482 ft. from the W line of Sec. 5, Blk. 4-A, G. W. Turley Sur.
S.D. 5,635 ft.

TOM GREEN COUNTY

Southwest Exploration Co.'s No. 1 Bennett, 1,320 ft. from S and 1,320 ft. from W of Section 1,628, Behringer Sur.
Drlg. 2,735 ft.

UPTON COUNTY

Broderick & Calvert's No. 1 Homer Trust & Savings Bank, 1,980 ft. from N line, 660 ft. from W line, Sec. 32, Blk. B-42, Twp. 4s, T.&P. Sur.
T.D. 1,137 ft.

Gulf Prod. Co.'s No. 103 McElroy, 1,980 ft. from S and 660 ft. from W, Sec. 197, Blk. F, C.C.S.D.&R.G.N.G. Sur.
Swabbed down 5,000 ft. no shows; T.D. 10,633 ft.

Perry & Breeding's No. 1 Lane, 1,650 ft. from S line and 990 ft. from E line of Sec. 36, Blk. 1, M.K.&T. Sur.
Location.

Stanolind Oil & Gas Co.'s No. 33 Burleson, 1,650 ft. from N line, 1,650 ft. from E line, Sec. 2, Nidever Sur.
Location.

Texas Pacific Coal & Oil Co. and Simms Oil Co.'s No. 4-D J. F. Lane, 990 ft. from S line and 1,650 ft. from W line, Sec. 36, Blk. L, M.K.&T. Sur.
Drlg. 1,990 ft.

Theabotal Oil Co.'s No. 2 J. F. Lane, 1,650 ft. from N and 990 ft. from E of Sec. 36, Blk. 1, M.K.&T. Sur.
S.D. 2,265 ft.

Williams & Williams Drlg. Co.'s No. 1 Robbins, 1,600 ft. from S and 1,900 ft. from E, Sec. 4, G.C.&S.F. Sur.
S.D. 1,995 ft.

VAL VERDE COUNTY

South-Western Exploration Co.'s No. 1 E. K. Fawcett, 2,310 ft. from S and 2,310 ft. from E, Sec. 14, Blk. L, G.C.&S.F. Sur.
Rig up.

WARD COUNTY

Atlantic Oil & Prod. Co.'s No. 3 Barrow, 2,310 ft. from NE line and 990 ft. from NW line of Sec. 33, Blk. 5, H.&T.C. Sur.
T.D. 3,065 ft.; set csg.

Alexander's No. 1 Richter, 1,650 ft. from NW, 1,170 ft. from NE line of Sec. 27, Blk. 34, H.&T.C. Sur.
S.D. 1,575 ft.

Bradford et al's No. 1 E. R. Allen, 660 ft. from NW line and 551 ft. from NE line, Sec. 11, H.&T.C. Sur.
Location.

H. L. Randall et al's No. 1 Lee Monroe, 2,310 ft. from NE and 330 ft. from SE lines of Sec. 77, Blk. 34, H.&T.C. Sur.
Drlg. 2,800 ft.

California Oil Co.'s No. 8 York, 990 ft. from N and 2,310 ft. from SW of Sec. 10, Blk. 34, H.&T.C. Sur.
S.D. 2,524 ft.

California Oil Co.'s No. 12 York, 1,650 ft. from SE line and 2,310 ft. from SW line, Sec. 10, Blk. 34, H.&T.C. Sur.
Location.

California Oil Co.'s No. 7 Durgin, 330 ft. from NW line, 2,310 ft. from SW line, Sec. 15, Blk. 34, H.&T.C. Sur.
Location.

California Oil Co.'s No. 9 Durgin, 330 ft. from SE line and 2,310 ft from SW line, Sec. 15, Blk. 34, H.&T.C. Sur.
Location.

California Oil Co.'s No. 10 Durgin, 2,310 ft. from SE line, 330 ft. from SW line, Sec. 15, Blk. 34, H.&T.C. Sur.
Location.

C. C. Duffey et al's No. 1 Llano-Sloan, 1,650 ft. from NW and NE lines of Sec. 24, H.&T.C. Sur.
Drl. 1,905 ft.

Eppenauer Drlg. Co.'s No. 1-B Comba, 435 ft. from SE and 1,826 ft. from SW, Blk. 4, J. W. Hollingsworth Sur.
Rigged up and S.D.

Farrell & Co.'s No. 4 Pure-Bennett, 990 ft. from NE and 1,650 ft. from SE, Sec. 16, Blk. 34, H.&T.C. Sur.
T.D. 2,550 ft.

Gulf Production Co.'s No. 32 Hutchins, 990 ft. from N line, 990 ft. from W line, Sec. 4, Blk. F, G.&M.M.B.&A. Sur.
Drlg. 3,101 ft.

Gulf Prod. Co.'s No. 50 O'Brien, 990 ft. from E line, 330 ft. from S line, Sec. 17, Blk. F, G.M.M.B.&A. Sur.
Drlg. 890 ft.

Gulf Prod. Co.'s No. 51 O'Brien, 330 ft. from N line, 330 ft. from E line, Sec. 18, Blk. T., G.M.M.B.&A. Sur.
Location.

Postellio & Capritto's No. 1 Purcell, 330 ft. from NE and 990 ft. from NW, Sec. 17, Blk. 34, H.&T.C. Sur.
Drlg. 2,460 ft.

Rector Oil Co.'s No. 1 Lee Monroe, 660 ft. from NE and 660 ft. from SE of Sec. 63, Blk. 33, H.&T.C. Sur.
S.D. 4,661 ft.

Rogers & Graham's No. 1 J. C. Wells, 330 ft. from SE and 603 ft. from SW, Sec. 19, Blk. 34, H.&T.C. Sur.
S.D. 482 ft.

Sageland Oil Corp.'s No. 3 Pure-Bennett, 1,650 ft. from NW and 2,310 ft. from SW, Sec. 16, Blk. 34, H.&T.C. Sur.
Spudded and S.D.

Tex-Mex Pet. Corp.'s No. 2-B Shell-Sloan, 2,310 ft. from NE and 990 ft. from NW, Sec. 16, Blk. 5, H.&T.C. Sur.
Drlg. 3,035 ft.

Tex-Mex Pet. Corp. et al's No. 3 Llano-Owens, 1,650 ft. from NW line and 2,310 ft. from SW line, Sec. 16, Blk. 5, H.&T.C. Sur.
Drlg. 1,195 ft.

WINKLER COUNTY

Harry Adams' No. 2 Scarborough, 990 ft. from N line and 990 ft. from W line, Sec. 2, Blk. 77, P.S.L. Sur.
Location.

Magnolia Pet. Co.'s No. 6 Scarborough, 1,650 ft. from S line and 330 ft. from W line of Sec. 4, Blk. 23-C, P.S.L. Sur.
Drlg. 2,920 ft.

Magnolia Pet. Co.'s No. 7 Scarborough, 1,650 ft. from N line and 990 ft. from E line of Sec. 18, Blk. 7, P.S.L. Sur.
Drlg. 2,690 ft.

R. S. Mathews et al's No. 1 Evans, 1,320 ft. from N line and 1,320 ft. from W line, Sec. 46, Blk. 73, P.S.L. Sur.
Spudded and S.D.

Sid Richardson's No. 1 Hill, 1,980 ft. from E line, 660 ft. from S line, Sec. 18, Blk. B-11, P.S.L. Sur.
Location.

Sid Richardson's No. 3-B W. D. Johnson, 330 ft. from SE and 2,310 ft. from SW, Sec. 22, Blk. 34, H.&T.C. Sur.
Location.

Sid Richardson's No. 1-H Scarborough, 2,310 ft. from E line and 650 ft. from S line of Sec. 4, Blk. C-22, P.S.L. Sur.
Rig up.

Sid Richardson's No. 5-A Scarborough, 330 ft. from W and 190 ft. from S, Sec. 1, Blk. 23-C, P.S.L. Sur.
Moving in machine.

Sinclair Prairie Oil Co.'s No. 3 W. F. Scarborough, 102 ft. from the N line, 1,650 ft. from E line, Sec. 1, Blk. 77, P.S.L. Sur.
Prepare to shoot; T.D. 3,026 ft.

Texas Panhandle Wildcats

Week Ending August 4

CARSON COUNTY

Empire Gas & Fuel Co.'s No. 1 C. S. Seiber, 1,328 ft. from E line, 330 ft. from S line of SE Sec. 10, Blk. 7, I.&G.N. Sur.
Set csg. 2,336 ft.

Hagy et al's No. 2 Bernard, C NE SE Sec. 44, Blk. 4, I.&G.N. Sur.
Location.

Hagy et al's No. 1 Sullivan, C NW Sec. 44, Blk. 4, I.&G.N. Sur.
Drlg. 2,405 ft.

Stanolind O. & G. Co.'s No. 2 L. C. McConnell, 330 ft. from N line, 330 ft. from W line, E½ SW Sec. 187, Blk. 3, I.&G.N. Sur.
Fishing 2,065 ft.

Texas Co.'s No. 2 E. Cooper, 330 ft. from S line, 330 ft. from W line, S½ Sec. 6, Blk. 9, I.&G.N. Sur.
C.O. to test; T.D. 2,116 ft.

CHILDRESS COUNTY

Humble Oil & Ref. Co.'s No. 1 B. P. Smith, 1,327 ft. from S line and 1,327 ft. from E line of Sec. 27, H.&G.N. Sur., Blk. 9
Fishing 3,800 ft.; showed 420 ft. of S.W on D.S. test at 3,780 ft.
T.D. 3,800 ft.; P.B. to 3,593 ft.; to drill by pipe.

DALLAM COUNTY

Eben Warner's No. 1 Jarble, 1,520 ft. from S line, 415 ft. from W line, Sec. 2, B.&B. Sur.
Fishing 3,200 ft.

GRAY COUNTY

Dixon Creek Oil Co.'s No. 1 Benedict, 330 ft from S and 330 ft. from W, Sec. 114, Blk 3, I.&G.N. Sur.
Drlg. 2,495 ft.

Gulf Prod. Co.'s No. 5 Ellis Cockrell, 330 ft from N and E lines, S½ Sec. 3, Blk. M-21, T.C.R.R. Sur.
Location.

Hoffman Oil Co.'s No. 1 D. M. Massey, 330 ft. from S line, 330 ft. from E line of 40-ac. of W 20-ac. of Sec. 41, H.&G.N. Sur., Blk. 25.
Spudded and S.D.

Johnson et al's No. 1 Thut, 330 ft. from N and 150 ft. S of S. A. Sweig.
Drlg. 2,520 ft.

Niapa Oil Corp.'s No. 1 Cole, 330 ft. from S and 330 ft. from W, Sec. 104, Blk. 3, I.&G.N. Sur.
Drlg. 3,297 ft.

Southwest Prod. Co.'s No. 1 T. Cobb, 1,320 ft. from S line, 990 ft. from E line, NE Sec. 184, Blk. 3, I.&G.N. Sur.
Rig burned; T.D. 2,450 ft.

Texwell Oil Co.'s No. 1 J. C. McConnell 330 ft. from S line, 330 ft. from W line, SW SW Sec. 174, Blk. 3, I.&G.N. Sur.
Set csg.; T.D. 3,106 ft.

HUTCHINSON COUNTY

Badger Oil Co.'s No. 6 Lewis, 330 ft. from S line, 330 ft. from E line, SE Sec. 8, Blk. 25, B.S.&F. Sur.
Prep. to shoot; T.D. 2,975 ft.

Brownie Oil Co.'s No. 1 Ware, 330 ft. from N and 330 ft. from W, Sec. 124, Blk. 4, I.&G.N. Sur.
Set csg.; T.D. 1,186 ft.

Huey et al's No. 1 Christian, 330 ft. from S and 330 ft. from W, Sec. 33, Blk. Y, A.&B. Sur.
Rig up.

Phillips Pet. Co.'s No. 3 A. Yake, 7,553 ft from N line, 330 ft. from W line, Sec 36, H.&T.C. Sur., Blk. 47.
Drlg. 2,360 ft.

Remo Oil Co.'s No. 1 Mankins, SW cor. SE SE Sec. 54, Blk. 13, H.&G.N. Sur.
Cellar.

Stanolind O. & G. Co.'s No. 4-C Ware, 330 ft. from N line, 1,650 ft. from W line, Sec. 20, Blk. M-21, T.C.R.R. Sur.
Rig up.

Texas Co.'s No. 1 W. E. Herring, 1,200 ft from E line, 1,200 ft. from N line of W 1,594 acres of the E. Almaguire Sur.
Drlg. 2,967 ft.

KNOX COUNTY

C. C. Christie's No. 1 Moore, Sec. 87, Blk 46, H.&T.C. Sur.
Location.

MOORE COUNTY

Phillips Pet. Co.'s No. 2 J. C. Wilson, Sec 157, Blk. T-3, T.&N.O. Sur.
Drlg. 4,000 ft.

WHEELER COUNTY

Alma Pet. Co.'s No. 1-B Johnson, 330 ft from N line, 330 ft. from W line, W½ NE Sec. 47, Blk. 25, H.&G.N. Sur.
Pay 2,448-69 ft.; swbng. oil; T.D. 2,504 ft.

Bowers & Carvers' No. 1 L. B. Sims, 330 ft from N line, 330 ft. from E line of SW SE Sec. 60, Blk. 17, H.&G.N. Sur.
S.D. 1,350 ft.

Dyke Oil Co.'s No. 1 G. W. Sitter, 330 ft from N line, 330 ft. from E line, N½ NW Sec. 28, Blk. 24, H.&G.N. Sur.
Drlg. 1,230 ft.

Johnson and Barrett's No. 1, NW cor. NE Sec. 24, Blk. 13, H.&G.N. Sur., 11 miles E and S of Shamrock.
Drlg. 360 ft.

LeFors Pet. Corp.'s No. 1 Perkins, 330 ft. from S line, 330 ft. from W line, Sec. 54, Blk. 24, H.&G.N. Sur.
Location.

Mid-Continent Pet. Corp.'s No. 6 J. S. Carwile, 990 ft. from N line, 990 ft. from E line of NE Sec. 51, H.&G.N. Sur., Blk. 24.
Testing; T.D. 2,440 ft.

Myers & Kennedy's No. 1 Harvey, 660 ft. from S and E lines of NW Sec. 67, Blk. 13, H.&G.N. Sur.
T.D. 2,285 ft.; to P.B.

Piney O. & G. Co.'s No. 1 Rippey, C NE Sec. 123, Blk. 23, H.&G.N. Sur.
Location.

Shell Pet. Corp.'s No. 1 Bush, 330 ft. from N line, 330 ft. from E line, N½ NE Sec. 48, Blk. 24, H.&G.N. Sur.
Pay 2,405-26 ft.; T.D. 2,492 ft.

Smith Bros.' No. 1 A. Plummer, 330 ft. from N line, 330 ft. from E line, N½ SW Sec. 45, Blk. 24, H.&G.N. Sur.
Flowed 250 bbls. in 36 hrs.; T.D. 2,520 ft.

Southwest Texas Wildcats

(Continued from Page 41)

T.D. 1,720 ft.; S.D.

Continental Oil Co.'s No. 3-A Clara, Driscoll Sevier, 3,675 ft. S and 1,000 ft. from E line of Sec. 448.
Drlg. 4,131 ft.; hard sand; no show.

Cox & Hamon's No. 1 State.
S.D. 400 ft.

Tom Graham and Texon Royalty's No. 1 Parr, 2,000 ft. from N line, 2,500 ft. from E line of Pointenant Sur. No. 185.
T.D. 3,624 ft.; S.O. 3,589-3,624 ft.

Frank Gravis' No. 1 Hubbard, 960 ft. S line, 330 ft. W line of B.S.&F. Sur. No. 83.
T.D. 1,760 ft.; S.D.

Harvey & Henderson's No. 1 Serma, 330 ft. from N line and 330 ft. from E line of S½ of Sec. 354.
Location.

O. R. Jeffers' No. 1 Cadena, 1,000 ft. from N line and 330 ft. from E line of Subd. No. 8 in Jose Marcello, Hino Jose grant.
Derrick.

W. C. McBride's No. 1 Haglst, 330 ft. from N and E lines of SE 80 ac. of Sec. 1.
T.D. 1,532 ft.; S.D.

O'Byrne & Jennings' No. 1 Benavides, 3,734 ft. from S cor. and 320 ft. from W line at right angles, Sur. 355.
T.D. 1,345 ft.; S.D.

Sun Oil Co.'s No. 1 Moreno, 330 ft. from E line and 2,000 ft. from S line of NW cor. of H.&W. Sur. 537, in Sec. 540 (5 mi. S of San Diego).
Drlg. 6,165 ft.

FRIO COUNTY

Amerada Pet. Co.'s No. 2 Halff & Oppenheimer, begin at most easterly N cor. of John H. Gibson Sur. No. 16, thence SE along NE line of Sur. 2,100 ft., thence SW at right angles 300 ft. (4 mi. SW of Pearsall).
Drlg. 6,775 ft.

GILLESPIE COUNTY

Dorre et al's No. 3 Lindig.
Drlg. 410 ft.

GOLIAD COUNTY

Duval Oil Corp.'s No. 1 Lucy Borden, 330 ft. NE cor. of 124-ac. tract in Alberto Guitteres Sur., 1½ miles W of Charco.
Location.

Kemp Oil Co.'s No. 1 Weldon & Lackey, 1,600 ft. from SW line and 1,700 ft. from NW line of the Javaine Gomez Sur.
Derrick.

Brice McCandless' No. 1 First Natl. Bank of Beeville, in Myers Sur.
Moving in rig.

Oceanic Pet. Co.'s No. 1 Fromme, 1,600 ft. S line, 1,200 ft. W line of 62-ac. tract in P. D. Dexter Sur., 10 miles N of Goliad.
Rigging up.

GONZALES COUNTY

Weinert et al's No. 1 Aug. Kallis, in Aug. Kallis' 150-ac. tract, just over Guadalupe County line in Gonzales County, 2,460 ft. N of river and in center of tract in Ira Mash Sur.
Location.

GUADALUPE COUNTY

Diamond Half Oil Co.'s No. 1 R. A. Ball, 3,000 ft. NE line and 3,500 ft. SE line of L. H. Peters Sur., 8 miles SW of Pequin. Drlg. shale 1,910 ft.

Diamond Half Oil Co.'s No. 1 Kallies, 2,340 ft. N of river and 150 ft. from W line of tract in Ira Nash Sur. Rigging up.

J. Elmer Thomas et al's No. 1 A. J. Mauermann, 5,250 ft. from W line and 33,300 ft. from S line of Joseph DeLabaume Sur. Spudded and S.D.

HIDALGO COUNTY

Davis & Harrison's No. 1 Lula George, 300 ft. from S and 700 ft. from E lines of Tract 13, Porcion 41, Ancient Jurisdiction of Reynosa. T.D. 3,620 ft.; S.D.

Rogers et al's No. 1 Fairbanks, 7 miles S of McAllen. T.D. 210 ft.; S.D.

Otto Woods' No. 1 John Lawrence, 530 ft. from W, 300 ft. from N line of Tract 274, Porcion 39, Ancient Jurdiction of Reynosa. T.D. 2,063 ft.; S.D.

Union Sulphur Co.'s No. 2 American Rio Grande L. & I. Co., 400 ft. from S and E lines of tract, Blk. 86, North Capisallo district. Drlg. plug 1,156 ft.

JIM HOGG COUNTY

Santa Clara's No. 1 W. W. Jones, 6,100 ft. from N line, 1,700 ft. from W line of Share 27, cor. of Blk. No. 111, in the Hino Jose grant. Drlg. 3,732 ft.

Sun Oil Co.'s No. 1 Martinez Est., center of tract No. 126, in Las Animas grant. Drlg. 1,700 ft.; (no report).

JIM WELLS COUNTY

Camp's No. 1 B. O. Owens, 900 ft. from N and E lines of Sec. 11. T.D. 500 ft.; S.D.

O. W. Killam's No. 1 Wade, 100 ft. NE line and 1,400 ft. NW line of Lot No. 1, Blk. C, Wade Subd. Location.

Plymouth Oil Co.'s No. 1 Cuero Cattle Co., 330 ft. from S and W lines of H.T.&B. Sur. No. 7, 2½ miles W from Alfred. Rigging up.

KARNES COUNTY

Auld & Ricker's No. 1 Schaefer, 1,300 ft. from S line, 300 ft. from W line of N. Schaefer 447.5-ac. tract in A. W. Belvins Sur. Location.

R. E. Ceveaux et al's No. 1 Tom Campbell, 330 ft. S. and E. cor. of farm and survey, J. R. Backer Sur., 12½ miles SW of Falls City. Spud and S.D.

Harrison Oil Co.'s No. 1 Martin Schaefer, 330 ft. from SW line, 1,200 ft. from SE line of L.P.L.A.&M. Sur. T.D. 1,400 ft.; S.D.

KENDALL COUNTY

Walter Bradley's No. 1 Werner, John F. Torrey Sur. T.D. 695 ft.; S.D.

Pierce & Garvey's No. 2 D. Werner, 1,140 ft. E, 430 ft. S line of J. F. Perry Sur., 4½ miles N of Kendalia. T.D. 465 ft.; S.D.

KERR COUNTY

Edmiston Oil Corp.'s No. 1 Whitworth, 1,160 ft. from S line and 1,333 ft. from E line of Sec. 1,439 of the H.E.&W.T. Sur. T.D. 675 ft.; S.D.

Jeff Love and Eastland Oil Co.'s No. 5-E Jeff Love, 1,500 ft. SE of No. 1 and 1,580 ft. from SE. cor. and 300 ft. from N line of Sec. 1,591. T.D. 1,500 ft.; S.D.

J. F. Morrissey et al's No. 1 Karga, 1,400 ft. from S line and 600 ft. from E line of survey, Sec. 1, B.S.&F. Sur. Drlg. 150 ft.; (no report).

G. F. Schreiner's No. 3 Love, 1,420 ft. from W line, 1,360 ft. from S line of Sur. No. 1,594. Drlg. 1,335 ft.

KLEBERG COUNTY

J. S. Brown's No. 1 Antone Dietz, Sec. 7, Hotch estate. T.D. 3,138 ft.; S.D.

LEE COUNTY

Jas. E. Pedersen's No. 1 Turner, David Hudson Sur. Drlg. 5,620 ft.

H. A. Sheriack's No. 1 Otto, 786 ft. from NW line, 1,310 ft. from NE line of 57.8-ac. tract in Thomas Morrow Sur. T.D. 1,495 ft.; S.D.

LIVE OAK COUNTY

J. H. Durbin's No. 3 Marbach, 1,850 ft. from W line and 450 ft. from S line of 438-ac. tract in Stephen Hays Sur. Moving in rig.

Houston Oil Co.'s No. 25 Cartwright, J. Sandman Sur. T.D. 5,258 ft.; spraying some oil; tubing pressure 1,320 lbs.; csg. pressure 1,320 lbs.; comp. 2,000,000 ft. gas and 45 bbls. oil daily.

Houston Oil Co.'s No. 26 Cartwright, 1,000 ft. NW of Cartwright No. 25. Set 13⅜-in. surface csg. 491 ft.

Lion O. & R. Co.'s No. 1 P. E. McNeill, 1,320 ft. from SW lines and 1,370 ft. from SE lines of Jane Curry Sur. Drlg. 3,415 ft.

Unity Pet. Co.'s No. 1 Terrill, begin at NE cor. of Reifert's 142-ac. tract, which is Blk. 7, go S along W line of survey 2,000 ft., thence E at R/A 316 ft. in C. Scanlon Sur. T.D. 935 ft.; S.D.

Witherspoon Oil Co.'s No. 2 Marbach, 330 ft. from NW line and 1,320 ft. from SW line of Subd. 15, 1,000 ft. N of No. 1, Jardin Sur. Location.

Witherspoon Oil Co.'s No. 3 H. Clements, 100 ft. S of No. 1 junked hole, Ellis Jordan Sur. Cemented 7-in. csg. at 515 ft.; W.O.C.

MAVERICK COUNTY

Stroman & Wright's No. 2 Debona, 440 varas E line, 330 varas S line of Sur. No. 1. T.D. 865 ft.; S.D.

McMULLEN COUNTY

Buford & Golightly's No. 1 Masuer, 760 ft. N line and 340 ft. E line of Sec. 22, H.T.&B. Sur., 5 miles W of Wentz. T.D. 1,010 ft.; S.D.

Hall & Howard's No. 2 Lark, Scrugham Sur. T.D. 1,074 ft.; testing.

Don Long's No. 1 Nueces Land & Livestock Co., Sec. 111. Rigging up.

A. P. Pierce's No. 1 Lark, 150 ft. NW cor. of Blk. 41, in Schrugham Sur. Derrick.

C. C. Shumway's No. 7 Shiner, 1,950 ft. from W line and 330 ft. from N line of Sec. 62. Spud and S.D.

MEDINA COUNTY

Scoggins & Sanders' No. 1 L. W. Burrell, 150 ft. from E line, 1,750 ft. from N line of M. E. Gage Sur. 395. T.D. 1,390 ft.; S.D.

MENARD COUNTY

Duffey-Chedster's No. 1 Mears Wilkinson, 660 ft. S line and 660 ft. W line of T.&N.O. Sur., Sec. 23, Abstract 756. Rigging up and S.D.

NUECES COUNTY

Holliday et al's No. 1 Hutchins, 330 ft. from N line, 94 ft. from W line of 62-ac. lease. Drlg. shale 3,359 ft.

Houston Oil Co.'s No. 3 W. W. Walton, 465 ft. from W line and between N and S lines of 16-ac. tract. Drlg. shale 3,290 ft.

Midland Oil Co.'s No. 1 S. M. Noakes, start where road crosses river, thence 1,400 ft. S, thence 300 ft. W at R/A, in Gregoria Farias grant. T.D. 6,000 ft.; S.D.

South Mineral Corp.'s No. 2 Ocher, 3,569 ft. from S line, 417 ft. from E line of 95-ac. tract in Sur. 418, Sec. 2. Sand 4,861-68 ft.; W.O.C.

Stanolind O. & G. Co.'s No. 2 Stratton, 1,980 ft. from N line, 660 ft. from W line of NE Sec. 13, DeAbajo grant. T.D. 5,000 ft.; D.S. test 4,801-17 ft.; 6 fourbles S.W. and small gas pressure; 10 min.; S.D.

Texas Seaboard's No. 1 Ed Jurica, 150 ft. from NE line, 500 ft. from W line of Blk. 33. T.D. 3,451 ft.; S.D.

REAL COUNTY

H. J. Heartwell et al's No. 2 L. J. Haby, 694 ft. from W line and 2,153 ft. from S line of A.B.&M. Sur. No. 175. T.D. 2,838 ft.; prep. to move in standard derrick.

SAN PATRICIO COUNTY

Atkins-O'Neil and Continental's No. 2 Welder, 466 ft. from S and E lines of lease, Blk. 2, two locations S of Circle W Oil Co.'s No. 1 Welder. T.D. 5,383 ft.; came in making some oil but went to S.W.; S.D.

Carpenter et al's No. 1 Sadler, 300 ft. each way out of SE cor. Blk. 1, Sec. 32, T. Peres Sur. T.D. 5,056 ft.; S.D.

Continental and Atkins & O'Neil's No. 1-A Welder, 584 ft. from NE line, 466 ft. from SE line of Blk. 2, Hart Sur. Coring 5,662 ft.

Hoep Oil Corp's No. 2 R. Welder, 466 ft. from S line, 2,000 ft. from E line of Adeline Welder tract in Victor Loupsey Sur. Derrick.

Hoep Oil Co.'s No. 3 R. Welder, 3,000 ft. from E line and 9,930 ft. from S line of lease in Loupsey Sur. Drlg. shale 4,795 ft.

Jane Oil Co.'s No. 1 Ragsdale Bros., Sec. 58, Geo. H. Paul Subd. T.D. 5,518 ft.; fishing.

Marland Oil Co. of Texas' No. 1 Micalastic, 660 ft. S and W, NE Sec. 6, George H. Paul Subd. Drlg. 2,170 ft.

Petrol Corp.'s No. 1 R. H. Welder, 467 ft. from S and E lines of 300-ac. tract. T.D. 6,000 ft.; S.D.

Plymouth Oil Co.'s No. 2-A Welder, 1,320 ft. due E of No. 1-A. Drlg. plugs 5,431 ft.

Stanolind O. & G. Co.'s No. 2 Stratton, 1 mile NE of No. 1, completed 2 yrs. ago. Location.

STARR COUNTY

Chas. H. Andrews et al's No. 1 A. Guerra San Jose grant, 330 ft. from N and 150 ft. from E line of Sec. 4 (NE part of county). T.D. 501 ft.; prep. to start up.

R. S. Boling's No. 1 M. M. Garcia, Sur. No. 918. T.D. 2,507 ft.; S.D.

Clements & Goldston's No. 1 J. M. Longfellow, 330 ft. out of NW cor. of Sur. No. 281. Location.

Jim Cloud, Inc.'s No. 1 J. Rodriques, Share 35, Porcion 88, ancient jurisdiction of Camargo. S.D. 160 ft.

Cooper & Andrews' No. 1 J. M. Martinez SW cor. of Sec. 135. Old well, to deepen; T.D. 2,200 ft.

Dean Bros.' No. 1 M. M. Garcia, 3,150 ft. from S line, 4,600 ft. from W line of Sur. No. 916. T.D. 2,227 ft.; S.D.

H. C. Harter's No. 1 Sanches et al, 530 ft. from N line and 450 ft. from W line of Share 73, Porcion 72. Drlg. 3235 ft.

Merle Gundy's No. 1 Block, NW of Sur. 167. Drlg. 4,161 ft.

R. M. Mitchell's No. 1 Seabury, 4,000 ft. from N line, 150 ft. from E line of Share 5, in Per Sur. No. 75. T.D. 210 ft.; S.D.

Smith-Tex. Oil Co.'s No. 1 Starr County Cattle Co., 150 ft. from NW cor. N. ½ Blk. 24, Porcion 89. T.D. 2,610 ft.; S.D.

Smith-Tex Oil Co.'s No. 2 Starr County Cattle Co., 150 ft. out of NW cor. of E ½ of Blk. 37, Porcion 89. Drlg. 1,450 ft.

Sun Oil Co.'s No. 2 E. M. Guerra & Son, 6,000 ft. N of Starr-Jim Hogg County line and 660 ft. from W line of "E" lease. Coring 2,697 ft.

E. L. Younkin's No. 1 Kelsey Bass, 330 ft. from S line, 7 ft. from W line of Blk. 19 in Porcion 37. Drlg. shale 1,450 ft.

TRAVIS COUNTY

Humble O. & R. Co.'s No. 1 P. C. Wells, 150 ft. NW line, 150 ft. NE line of farm 135 ft. SW line and 1,000 ft. SE line of James P. Kemp Sur. T.D. 1,435 ft.; S.D.

UVALDE COUNTY

Evans & Johnson's No. 1 Farris, J. Hammons Sur. T.D. 1,050 ft.; S.D.

Lon Evans' No. 1 Stone, 2,566 ft. from N line and 1,473 ft. from E line of survey 8½ miles NE of Uvalde, Kent. Sur. No. 652. T.D. 129 ft.; S.D.

Humble Oil & Ref. Co.'s No. 1 R. L. Anderson, 7,450 ft. SW of NE line and 9,100 ft. SE of NW line of J. J. Guerra Sur. (3 mi. NE of Uvalde). T.D. 3,665 ft.; prep. to sidetrack.

T. T. Word et al's No. 1 Quinn Broden, 2,000 ft. S line and 350 ft. W line of John Young Sur. No. 397. Drlg. 235 ft.

T. T. Word's No. 2 Trulove, 40 ft. N, 42 des E of No. 1. T.D. 874 ft.; S.D.

WEBB COUNTY

Fidelity Exploration Co.'s No. 1 Soldivar, 1,300 ft. from E line, 2,600 ft. from N line of Sur. 657. Drlg. 2,026 ft.

Kismor Oil Co.'s No. 1-B Bruni Est., 300 ft. NW line and 418 ft. SW line of Blk. 23, M. Arispe grant. Derrick.

Weekley Oil Corp.'s No. 1 R. Salvidor, 1,269 ft. from E line and 243 ft. from N line of Sec. 657, Borrego grant (SE part of county). T.D. 657 ft.; S.D.

Wolcott et al's No. 1 D. Green, 1,865 ft. from W line and 1,552 ft. from N line of Sur. No. 282. T.D. 450 ft.; S.D.

WILLACY COUNTY

W. W. Silk's No. 1 Stillman, Lot 16, Blk 39, Santa Rosa Subd., Share 44. Drlg. 1,000 ft.

WILLIAMSON COUNTY

Taylor Ref. Co. et al's No. 1 Pumphrey, 450 ft. N and W lines of 102-ac. tract in W. West Sur. Derrick.

ZAPATA COUNTY

Robt. Allison's No. 1 E. T. Garza, 150 ft. NE cor. of Blk. 5, in Sur. No. 13. Rigging up.

Danvers & Harrison's No. 1 M. J. Bela, 686 ft. NE line and 300 ft. NW line, or 3,140 ft. E line and 330 ft. N line of Por. 39, Blk. 7, Bela Subd. Rigging up.

F. G. Delaney et al's No. 1 Bolpe et al, 330 ft. from N cor. of Blk. 1, Share 1, of Delaney Subd., Portion 32. T.D. 80 ft.; W.O.C.

Merle Gunby's No. 1 Haines, 200 ft. from SE and SW lines of Blk. 4, Alice Haines Subd., in Cuevitas grant. Drlg. 425 ft.

R. V. & W. Oil Co.'s No. 1 Cuellar. T.D. 1,125 ft.; S.D.

Muckelroy's No. 1 Flores, on NE line and 75 ft. from SE line of Lot 2, Blk. 30 Muckelroy Subd. of Porcion No. 37. Derrick.

Joe Palmer's No. 11 S. Vela, 330 ft. from NE and SE lines of Blk. 170, Share 4 of L. Grillo grant (3 mi. E of Redondo Pool). Drlg. 342 ft.

R. & M. Drlg. Co.'s No. 1 M. D. Slator, Blk. 65, of Mission Oil Co. Subd. in J. W. Borrego grant. Location.

Southwest Texas Proven

Week Ending August 4

NORTH DALE POOL—BASTROP COUNTY

Watt L. Saunders' No. 1 Harris, 1,100 ft. from SW line, 2,430 ft. from NW line of John Maximilian Sur. No. 22. Top Austin 2,149 ft.; T.D. 2,335 ft.; S.D

NORTH PETTUS FIELD—BEE COUNTY

Bryce McCandless' No. 1 Beeville Natl Bank, 330 ft. out of NW cor. of 142-ac. tract in G. B. Meyers Sur.

Diamond Half Oil Co.'s No. 1 Runge State Bank, 330 ft. from NW line and 330 ft. from SW line of 142-ac. tract, 1 mi. NE of Weinert Smith well, Myers Sur. No. 26. T.D. 3,745 ft.; S.D. Building derrick and moving in rig.

Houston Oil Co.'s No. 3-B Niehaus, 350 ft. from NW line and 330 ft. from SW line of "B" lease. T.D. 3,662 ft.; comp. for gas well and estimated 40 bbls. oil day; 825 lbs. pressure 3/16-in. choke.

Houston Oil Co.'s No. 4-B Niehaus, 660 ft. S of No. 2-B. Bldg. derrick.

Kemp Oil Co.'s No. 1 Weldon & Lackey, 1,664 ft. from NW line, 1,607 ft. from SW line of 1,000-ac. tract in J. Gomez Sur. Derrick.

Magnolia Pet. Co.'s No. 6 Porter, 330 ft. from S line of lease, 660 ft. E of No. 3. T.D. 3,700 ft.; comp. 13 bbls. hr.

Magnolia Pet. Co.'s No. 7 Porter. Spud.

Sun Oil Co.'s No. 2 Scarborough, 330 ft. from NW and SW lines of lease in E. Talley Sur., 500 ft. W of No. 1. Derrick.

EAGLE HILL POOL—DUVAL COUNTY

Cloyes and Alpha's No. 1 Hagist, 330 ft. from N and E lines of Blk. No. 14, in Sur. No. 265. Drlg. 2,022 ft.

GOVERNMENT WELLS POOL—DUVAL COUNTY

Bridwell Oil Co.'s No. 5 C. W. Hahl, 330 ft. from N and E lines of Blk. No. 23, Sec. 250. Location.

Bridwell Oil Co.'s No. 1 Schoolfield & O'Brien, 330 ft. from N and W lines of Blk. No. 13, Sur. No. 78. T.D. 2,434 ft.; abd.

Govt. Wells Corp.'s No. 1 Lundell, Sur. 60. Rigging up.

Harrison & Abercrombie's No. 1 Serna, 1,336 ft. from E line and 936 ft. from S line of Sec. 523. T.D. 1,060 ft.; S.D. for wtr.

Humble O. & R. Co.'s No. 32 Paul White, 3,300 ft. from E line and 990 ft. from N line of Sur. No. 249. Location.

Humble O. & R. Co.'s No. 33 White, 3,630 ft. E line and 330 ft. S line of Sur. 249. T.D. 2,252 ft.; comp. 10,000,000 ft. gas.

Humble O. & R. Co.'s No. 34 Paul White, Sur. No. 249. Location.

K. O. T. Oil Co.'s No. 4 Luncell, 330 ft. from S and W lines of NW of SW, or 1,750 ft. from S line and 330 ft. from W line of Sur. No. 48. T.D. 2,241 ft.; W.O.C.

Magnolia Pet. Co.'s No. 1 Duval County Ranch, 330 ft. N line and E line of Sur. No. 58. Drlg. shale 4,350 ft.; (no report).

Magnolia Pet. Co.'s No. 7 Duval Ranch, 990 ft. N line and 330 ft. E line of Sur. 59. Drlg. 1,520 ft.

Magnolia Pet. Co.'s No. 29 Duval, 1,650 ft. from W line, 2,310 ft. from S line, Sur. 208. T.D. 2,316 ft.; comp. 50 bbls.

Magnolia Pet. Co.'s No. 30 Duval Co. Ranch, Sur. No. 208. Location.

Magnolia Pet. Co.'s No. 1-C Hall, 990 ft. S line and 330 ft. E line of lease. T.D. 2,373 ft.; swabbing.

Magnolia Pet. Co.'s No. 9-A Hahl, 330 ft. from S and E lines of Sur. No. 45. Location.

Magnolia Pet. Co.'s No. 2 L. B. Moody, 300 ft. S line and 150 ft. W line of NW cor. of SW of Sur. No. 60. T.D. 2,378 ft.; comp. 35 bbls. day.

Magnolia Pet. Co.'s No. 8 Tankersley, 330 ft. from S and W lines of Sur. No. 46. T.D. 2,298 ft.; comp. 50 bbls. day.

Russ et al's No. 8-A Hahl, 430 ft. from N line and 330 ft. from W line of NE of SW of Sur. No. 45. T.D. 2,304 ft.; comp. 10 bbls. hr.

J. D. Clair Smith's No. 2 Norton, 330 ft. from S and W lines of Sur. No. 62. Derrick.

Sun Oil Co.'s No. 65 Welderkehr, Sur. 359. T.D. 2,250 ft.; testing.

Sun Oil Co.'s No. 66 Welderkehr, Sec. 359. T.D. 2,286 ft.; comp. 25 bbls. hr.

Sun Oil Co.'s No. 67 Welderkehr, Sur. 359. Location.

SARNOSA POOL—DUVAL COUNTY

R. R. Thomas' No. 1 Well, 330 ft. from SW and NW lines of Sur. No. 136. T.D. 2,510 ft.; dry and abd.

JACOB POOL—McMULLEN COUNTY

Kennon's No. 3 Lark, 660 ft. from N line, 330 ft. from E line of E½ of Blk. 15, Scrugham Sur. T.D. 1,033 ft.; testing.

Loma Oil Co.'s No. 102-A Jacobs, 660 ft. S of No. 101-A, in Sur. No. 8. T.D. 890 ft.; W.O.C.

Stewart-Smith & Storey's No. 1 L. Jacobs, 3,801 ft. due S of Texio's No. 2 Jacobs, in John Fadden Sur. No. 8. T.D. 864 ft.; testing.

CUEVITAS POOL—STARR COUNTY

Sun Oil Co.'s No. 5-C M. Guerra & Son, 1,320 ft. NE of No. 4-C La Sacatosa grant. Location.

AGUA DULCE—NUECES COUNTY

Camp. et al's No. 2 King, 990 ft. S of N line, 330 ft. W of E line of Sec. 24, R. Garza Sur. T.D. 4,021 ft.; P.B. to 3,455 ft.; W.O.C. 5,550 ft.

Clymore Prod's No. 2-B J. C. Ingram, 660 ft. from E line, 500 ft. from N line, Sec. 9, Blk. 3, Peters Subd. Location.

Clymore Prod.'s No. 3 Ingram, 660 ft. from E and S lines, Sec. 6, Blk. 6, Peters Subd. Derrick.

Clymore Prod. Co.'s No. 3-D Ingram, 660 ft. from S and W lines of Lot No. 7, Sec. 6, Peters Subd. No. 2. Location.

Clymore Prod. Co.'s No. 1-C Ollie Purl, 660 ft. N and E lines of Lot No. 2, Sec. 7, Peters Subd. No. 2. Moving in rig.

WEST COLE POOL—WEBB COUNTY

Cole Pet. Co.'s No. 85 Benavides, 1 mile N of United's No. 2 producer. T.D. 3,432 ft.; prep. to drill in.

Cole Pet. Co.'s No. 86 Benavides, Sur. No. 1, Callaghan homestead tract. Location.

United Prod. Co.'s No. 1 Bruni. Prep. to deepen; old T.D. 3,417 ft.; coring 3,425 ft.

LOS OLMOS POOL—STARR COUNTY

Goodwin Yantis' No. 6 Kelsey Bass, Sec. 4, Portion 87, Ancient Jurisdiction of Camargo. Top gas sand 660 ft.; showed for good producer.

JENNINGS POOL—ZAPATA COUNTY

Texas Co.'s No. 50 Jennings, N 12 deg. 30 ft., E 750 ft. from Clay No. 46. Oil sand 1,588 ft.; comp. 30 bbls. day.

Fourteen Locations in North Louisiana-Arkansas; Two Made in Mississippi and One in Alabama

By J R CRUMPTON
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., Aug. 6.—Of the 14 new locations staked in this division during the past week, six are rank wildcats that will be closely watched during the process of drilling. The North Louisiana district has two such tests out of nine new operations. A second attempt will be made in the Bloomburg area in the southwestern part of Miller County, Arkansas. The Mississippi district will have two new tests in as many counties and Alabama reports one new wildcat.

NORTH LOUISIANA

Gulf Refining Co. is moving in rig on its No. 1-A T. Crichton near the center of Section 15-18-9, north of the town of Sibley in Webster Parish. The test is on a block of approximately 6,000 acres a few miles north of three wildcats drilled in a limited area during the latter part of last year by J. P. Evans and associates. All of the latter were dry holes in the Blossom horizon, and one of them was drilled to the Woodbine, to show only a slight trace of oil and gas. Gulf Refining Co. has done much torsion balance and seismographic work in this area during the past few years and the present test is being drilled as a result of these surveys. There is no definite contract depth, but it is generally conceded the operators are looking for the Blossom sand to carry the pay. The same company's No. 1 Bridgeman, Section 20-19-8, on a geophysical high a few miles northeast of the present test, was abandoned in rock salt at 1,922 feet last year. The top of the salt dome was encountered at 1,912 feet.

The second important North Louisiana wildcat was staked by L. M. Moffitt, trustee, and Magnolia Petroleum Co., No. 1 Martin and others, in Section 31-22-11, Bossier Parish. This is the second test on a block of 17,000 acres, east of the town of Plain Dealing and a few miles south of the Carterville Field in the northern part of Bossier Parish. The first test, in which Ohio Oil Co. was also interested, No. 1 Antrim Lumber Co., Section 26-22-12, was recently abandoned as a dry hole at 3,502 feet. The only other wildcat in this district for the past week was a shallow test in Winn Parish. Red River Refining Co. has derrick on its No. 2 Tremont Lumber Co., Section 26-11-1w. Same company's first effort in Section 35-11-1w, was a failure at 1,611 feet and failed to encounter a show reported in a well drilled in that area several years ago.

Wildcat Failure

Among the completions in North Louisiana was a wildcat failure that had been closely watched. Plummer & McDaniels' No. 1 Walmsley, Section 45-10n-8w, on a block of 6,000 acres in the northern part of Natchitoches Parish, was dry and abandoned at 5,362 feet. The other three dry holes were in proven or semiproven areas. The Converse and Zwolle Fields reported one each from the chalk rock horizon and a shallow Nacatoch test for gas in the Blanchard Field, Caddo Parish, was listed as one of the few failures in that area.

Although seven oil wells were reported, four were old wells in the Bellevue shallow field in Bossier Parish that have recently been reworked. Premier Invincible Co. has taken over the Wyche lease in Section 14-19-11, formerly operated by Standard Oil Co. of Louisiana prior to a shut down of this field several years ago. Most of the old wells in this area that have been reworked, as well as the new holes drilled, have averaged about 10 bbls. daily with about 300 bbls. of salt water. One of the wells, Premier Invincible Co.'s No. 5 Wyche, is reported to be pumping 150 bbls. of oil daily with considerable salt water. Two new wells drilled in this area were completed with the average production of about 10 bbls. In the Converse Field, Laurel Petroleum Co.'s No. 6 Frost Lumber Industries, Section 20-9-13, is flowing 38 bbls. daily through 2-inch tubing from 1,593 feet.

Continued dry weather with the resultant lack of water has many rigs shut down but a limited number of wildcats are actively drilling. In Avoyelles Parish, Bell Oil Co.'s No. 1 Woodley, Section 11-2n-5e, has skidded 15 feet north from the original hole and is coring at 1,700 feet. Saline Drilling Co.'s No. 1 Pardee, Section 27-14-6, Bienville Parish, has spudded in and set surface casing at 142 feet. This is the first of two contemplated tests on adjoining blocks in the southern part of the parish. Producers Oil & Gas Co.'s No. 1 Werner, Section 7-17-11, a few miles northeast of the Sligo Field, Bossier Parish, is still fishing for stuck drill stem at 3,984 feet. In DeSoto Parish, the most active wildcat area, two new operations are rigging up, Hester and others' No. 1 Alston, Section 11-11-16, and George Le Grand's No. 1 Vance in Section 34-12-16. In the same parish, Jack Clarke's No. 1 Moore, Section 1-13-15, is drilling in shale at 1,335 feet, and a deep test near the town of Longstreet on the western border of the parish, E. T. Oakes' No. 1 Bryant, Section 30-13-15, is coring in anhydrites at 5,390 feet. A Red River Parish test, W. K. Williams' No. 1 De Moss estate, Section 33-13-11, tested 500 bbls. of salt water and considerable oil at 2,468 feet and the operator is plugging back to shut off the salt water.

ARKANSAS

The Bloomburg Oil Corp. has staked location for its No. 1 Patterson in the SE cor. SE NE Section 5-19-28, Miller County, that should either prove or disprove that area as an oil field. The new test is 200 feet east of E. L. Young's No. 1 Patterson, same section, which was recently junked and abandoned when casing parted while testing. The first test caused quite a leasing campaign in that vicinity after coring about 2½ feet of likely looking sand from a total depth of 3,655 feet in what was identified as the Woodbine.

Hempstead County is coming to the front as a wildcat area with three active tests. E. L. Austin's No. 1 J. W. McWilliams, Section 19-13-23, topped the Nacatoch at 697 feet and is temporarily shut down at 700 feet. F. W. Martin & Co.'s No. 1 Lafferty, Section 17-24-14, is rigged up, and Arkansas Drilling Co.'s No. 1 Jones, Section 11-14-24, is shut down after setting surface at 160 feet.

There were no further developments along the Balcones or Humble fault in Lafayette County. Benedum & Trees' No. 1 Bodcaw Lumber Co., Section 19-16-23, is rigged up and ready to spud in, and Earl F. Fox's No. 1 Coleman Bros., Section 36-16-25, is temporarily shut down for bailer repairs at 2,258 feet.

The Arkansas district had two completions during the week, both in the Miller County Field. Lee Timberlake's No. 1 E. L. Beck, Section 33-15-12e, failed to encounter any sand after careful coring and the hole was abandoned as dry at 2,967 feet. John Wrather's No. 1 E. V. Olivet, Section 4-16-26, is a 30-bbl. pumper from 2,937 feet. The former test was about one-fourth mile north of proven production, and the latter was about the same distance to the south.

MISSISSIPPI

Two new locations were staked in this district in separate counties. In Lamar County, Hix & Germany's No. 1 J. J. Newman Lumber Co. is in Section 21-4n-15w, and in Scott County, R. W. Woods and others' No. 1 Rogers, Section 4-5n-6e, is rigging up. One wildcat failure was recorded in this state. Pelican Oil & Gasoline Co.'s No. 1 Steel Bayou Corp., Section 14-12n-8w, had drill stem stuck at 3,125 feet and the test was abandoned as a junked hole at that depth.

A new test in Clarke County, Clarke County Oil & Gas Co.'s No. 1 Kirkland, Section 10-2n-16e, has set 13⅜-inch surface casing at 133 feet. In the Hinds-Rankin area of the Jackson Field, two wells are rigging up in the former and one is drilling on the east side of Pearl River in the latter county.

ALABAMA

Magnolia Petroleum Co.'s No. 1 Scotch Lumber Co., Section 17-10n-3e, Clarke County, is drilling in red shale at 5,056 feet, and in Houston County, Rice Oil & Gas Co.'s No. 1 Oakley estate is temporarily shut down curing titles at 1,810 feet. A Lamar County test that has been shut down for the past few months, De Soto Oil & Gas Corp.'s No. 1 Gardner, Section 22-15s-16w, has resumed operations and reamed down to 4,153 feet. A new wildcat was staked in Pike County, Alabama Drilling Co.'s No. 1 Faulk, Section 31-1n-21e.

Wildcat Operations in Louisiana-Arkansas

(Rotary operations unless otherwise designated)

NORTH LOUISIANA

AVOYELLES PARISH

Bell Oil Co.'s No. 1 Woodley, 330 ft. S and W NE cor. NW Sec. 11-2n-5e.
Set 10-in. 120 ft.; coring 1,700 ft.

Haas & Stokes' No. 1 Lindstrum Land Co., 690 ft. S. 980 ft. E. NW cor. Sec. 34-1n-6e.
Set 12-in. 40 ft.

BIENVILLE PARISH

Saline Drlg. Co.'s No. 1 Pardee, Sec. 27-14-6.
Set 10-in. 142 ft.

BOSSIER PARISH

Bossier O. & G. Co.'s No. 1 Sherrill, 300 ft. S and W, NE cor. Sec. 13-9-12.
S.D.; W.O. 2,261 ft.

Dickinson & Pearce's No. 1 Taylor, 160 ft. S and W, NE SW NE Sec. 14-19-11.
Set 10-in. 88 ft.; drlg. 315 ft.

Howard & Baird's No. 1 Gold, 150 ft. S and E. NW cor. Sec. 36-20-13.
S.D. for water 1,126 ft.

McKinney & Stewart's No. 1 Nattin, 470 ft. W. 620 ft. S. NE cor. Sec. 22-22-14.
S.D. 2,973 ft.

CADDO PARISH

Ark.-La.-Tex. O. & G. Co.'s No. 1 Simon, 330 ft. N and E. SW cor. Sec. 15-20-15.
Tested S.W. 1,560 ft.

W. T. Bell et al's No. 1 Bostick, 1,320 ft. E. 660 ft. N. SW cor. Sec. 12-22-16.
S.D. for water, 2,540 ft.

Burkett O. & G. Co.'s No. 1 Lindholm, 400 ft. S and E. NW cor. NE SE Sec. 15-17-14.
S.D. 1,046 ft.; repairing rig.

Capitol O. & G. Co.'s No. 1 Noel Est., 300 ft. S and E. NW cor. NE Sec. 12-20-16.
S.D. 450 ft.

A. D. King, tr.'s No. 1 Roach, 641 ft. E. 375 ft. N. SW cor. SE Sec. 4-14-16.
S.D. 2,128 ft.

Simplex Oil Co.'s No. 9 Youree-Randolph, 460 ft. S and W. NE cor. SE Sec. 13-20-15.
P.B. set 6-in. 1,778 ft.

Simplex Oil Co.'s No. 1 Glassell, 330 ft. S and E NW cor. Sec. 23-20-15.
Rigging up.

CALDWELL PARISH

Terrell & Price's No. 1 La. Central Lbr. Co., 300 ft. N. 200 ft. W. SE cor. NW NE Sec. 15-11-3e.
Drlg. shale 2,027 ft.

DESOTO PARISH

L. H. Alderson's No. 1 Peek, SE cor. NW NE Sec. 25-11-13.
S.D. for wtr. 2,030 ft.

Jack Clarke's No. 1 Moore, 330 ft. S and W NE cor. NW Sec. 1-13-15.
Drlg. 1,335 ft.

Dempsey & Manziel's No. 1 Thigpen, 375 ft. S. 330 ft. W. NE cor. SW NE Sec. 33-13-13.
S.D. for wtr. 1,605 ft.

Hester et al's No. 1 Alston, 330 ft. S and W of center of Sec. 11-11-16.
Rigging up.

George Le Grande's No. 1 Vance, 180 ft. N and W SE cor. SW Sec. 34-12-16.
Rigging up.

Sunrise Pet. Co.'s No. 2 Wemple, 730 ft. N. 956 ft. E SW cor. NW SW Sec. 14-12-11.
Set 10-in. 60 ft.; drlg. 1,400 ft.

Texas Co.'s No. 12-A Wemple, Sec. 1-12-12.
Fishing for D.S. 3,071 ft.

J. S. Tuffree's No. 1 McGill, 450 ft. N. 150 ft. W. SE cor. SW SE Sec. 1-10-13.
S.D. 2,125 ft.

MOREHOUSE PARISH

Grecian Bend Gas Co.'s No. 1 Patton, 759 ft. E. 177 ft. S NW cor. NE Sec. 11-20-4e.
Set 6-in. 2,115 ft.

Zeiger & Bacon's No. 1 Crossett, 400 ft. N. 300 ft. W. SE cor. Sec. 41-23-6e.
T.A. 3,111 ft.

NATCHITOCHES PARISH

Jack Let's No. 1 Brown Lbr. Co., 400 ft. S. 300 ft. E. NW cor. NE SW Sec. 27-9-13.
Set 10-in. 21 ft.

Missouri Drlg. Co.'s No. 1 Brown Lbr. Co., 400 ft. N. 330 ft. W. SE cor. Sec. 5-10-10.
S.D. 1,033 ft.

Plummer & McDaniel's No. 1 Walmsley, SE SW Sec. 45-10n-8w
Dry and a nd. 5,362 ft.

Roy A Raines et al's No. 1 Raines est., 330 ft. N and E. SW cor. Sec. 28-9-10.
W.O. casing 2,260 ft.

J. B. Storey's No. 1 W. W. Page est., NE cor. SE NW Sec. 18-8-9.
S.D. 1,544 ft.

OUACHITA PARISH

Carbons Consolidated's No. 8 Guthrie, 1,550 ft. N 250 ft. W of SE cor. Sec. 22 in Sec. 50-20-4e.
Set 12-in. 182 ft.; set 8-in. 772 ft.

Carbons Consolidated's No. 4 Cole, 662 ft. S. 1,969 ft. W. NE cor. Sec. 26-20-4e.
Plugging back; old T.D. 2,504 ft.

United Carbon Co.'s No. 3 Cole, 1,320 ft. N. 661 ft. E. SW cor. Sec. 25-20-4e.
Set 6-in. 2,131 ft.

RED RIVER PARISH

Louis L. Glass' No. 1 Dickson, 400 ft. S and W. NE cor. NW SE Sec. 32-12-9.
S.D. 1,004 ft.

Kincaid & Kelly's No. 1 Ober, 315 ft. N. 257 ft. W. SE cor. NW SE Sec. 5-14-10.
T.A. 2,915 ft.

(Continued on Page 76)

Daily Gross Production

Estimated daily gross production, all companies, week ending August 3:

North Louisiana

Caddo Light	4,675
Caddo Heavy	1,560
Converse	1,750
Cotton Valley	540
De Soto and Red River	1,470
Elm Grove	385
Haynesville	3,700
Holly	180
Homer	2,650
Pleasant Hill	200
Sarepta-Carterville	700
Urania	3,110
Zwolle	2,585
Total	24,405

South Arkansas

Champagnolle	1,190
El Dorado	2,400
Lisbon	360
Miller County	1,605
Nevada	920
Smackover Light	2,380
Smackover Heavy	19,580
Stephens	625
Urbana	2,600
Total	31,760

Two Big Wells in the Wilcox Sand in Fitts Pool Convert That Area Into a Major Prospect

By JAMES McINTYRE

The John Fitts Pool in Pontotoc County, Oklahoma, was the most discussed spot in the State in the last few days due to the performance of two wells brought in in that area during the week, both of which are in a class by themselves as compared to other wells in that field. J. C. Shaffer and W. A. Delaney's No. 1-A (Twin) Hardin, NE NW SW Section 30-2-7, had dolomitic sands from 4,069-83, 4,093-4,105, 4,175-4,200, flowing 603 bbls. in 3 hours. Total depth was 4,210 feet. The well was shut in for erection of two 500-bbl. flow tanks.

Crosbie & Moran's No. 2 Hardin, NW SE NE Section 30-2-7, Pontotoc County, John Fitts Pool, had dolomitic sands from 4,180-4,290 feet, flowing an average of 104 bbls. per hour for 14 hours through a 1-inch choke. Its largest 1 hour gauge was 386 bbls. flowing through the casing.

The wells were shut in for lack of storage room or pipe line facilities.

These wells have given new life to a pool which started off very encouragingly then proved disappointing, and now appears to offer a chance of big production.

The Fitts area is a greater puzzle to oil operators and geologists now than it was before the advent of these producers, the main source of argument being which way the production trends. It is a field of many sands and everyone of these appears to have at least a showing of oil or gas and some of the sands are tremendous gas producers with a heavy rock pressure.

It is likely the field will be confined to 1,000 bbls. per day by the proration department with the consent of the operators, with the old wells producing to capacity and the new flush wells of large potential greatly curtailed.

Section 30 in which the two big wells were drilled in last week is leased by W. A. Delaney, Crosbie & Moran, Shaffer, Delaney and others, and the Magnolia Petroleum Co. Ed Moore and others own three quarter sections in Section 29, Moore & Wirick 40 acres and Magnolia Petroleum Co. 40 acres. Loual Oil Co., Magnolia, Delaney, Simpson and Bishop own the leases in Section 25-2-6.

The Stanolind Pipe Line Co. has a 4-inch line into the pool which is large enough to handle all the production the proration department will permit for some time to come.

Magnolia Petroleum Co. has made a location in C NE SW NE Section 25-2-6, and a location for a Gilcrease sand gas test for fuel purposes in NE SW NE Section 25. Same company has made locations for No. 1, C SW NW NE Section 30-2-7, and for No. 2, C SE NE NW Section 30.

E. H. Moore's No. 2 Wirick, NE SE SW Section 29-2-7, Pontotoc County, had encountered Viola lime at 3,568 feet and at 3,807 feet in Viola it flowed 105 bbls. of oil. It was to be drilled deeper.

Blackstock and others' No. 1 Lewis, NE SE Section 10-2-7, Pontotoc County, was shut down at 4,911 feet in Simpson formation with nothing showing. This well was running considerably lower on formation tops than other wells nearby. It will be deepened.

Osage County

The Carter Oil Co., Indian Territory Illuminating Oil Co. and Norbla Oil Co.'s No. 1 D. Munza, SW NW Section 2-25-6, which extended production in the South Burbank Field one location east last week, has been completed for 659 bbls. in 24 hours, production from the Burbank sand logged at 2,820-78 feet, total depth.

Carter Oil Co. and Empire Oil & Refining Co.'s No. 4 Higdon, SE NE Section 3-25-6, had Burbank sand from 2,801-56 feet, total depth, and was completed for 3,017 bbls. in 24 hours. This is a west offset to the above mentioned well and tends to show how erratic some of the "best" of producing areas are.

Skelly Oil Co. was getting a nice well in its No. 6 Ducotey, SE SW SW Section 3-25-6. Burbank sand was encountered at 2,685 feet, and at 2,700 feet, total depth, well flowed 1,081 bbls. in 6½ hours, with an estimated 10,000,000 feet of gas. It was necessary to shut the well in at the end of the short gauge due to fire hazard afforded by the wild well of the Mid-Co Oil Co. offsetting it to the south.

Mid-Co Oil Co.'s No. 5 Adlum, NE NW NW Section 10-25-6, scratched Burbank sand at 2,675 feet and immediately got out of control, flowing wild an estimated 200 bbls. of oil an hour with 8,004,000 to 10,000,000 feet of gas. After several hours of promiscuous flowing it was under control, but no actual gauges on production were available.

Offsetting the chat producer of Champlin Refining Co. to the north, Carter Oil Co., Bay Oil Co. and Norbla Oil Co.'s No. 5 Oliphant, SW SE SE Section 10-25-6, has turned out to be one of the lightest Burbank sand producers in the field to date. Sand was topped at 2,825 feet, and at 2,867 feet, swabbed 40 bbls. It was then given a 60-quart shot of nitro from 2,848-72 feet, flowing 24 bbls. At a total depth of 2,892 feet, gas increased from 190,000 to 790,000 feet, producing 40 bbls. in 12 hours through tubing.

Champlin Refining Co.'s No. 6 Maker, NW NE NE Section 15-25-6, which had broken Burbank sand at 2,823-41 feet and which was dry, has been completed for 105 bbls., production coming from the chat 2,925-41 feet, total depth.

Champlin Refining Co.'s No. 2 Terrill. NE NW SE Section 15-25-6, had broken shale from 2,787-2,852 feet, where the Burbank sand was expected, producing water. It was deepened to 3,256 feet, 23 feet in the Hominy sand, where a hole full of water was encountered, then plugged back and chat from 2,890-2,911 feet produced 15 bbls. on swab, but water broke in and the well was abandoned.

Champlin Refining Co. was getting a producer in its No. 3 Terrill, NW SW SE Section 15-25-6, getting Burbank sand at 2,723-68 feet, total depth, which yielded 180 bbls. the first 24 hours and 151 bbls. the second 24 hours. It had not been completed.

The H. F. Worley test, No. 1, SE NE SW Section 16-25-6, which extended production in the South Burbank Field one-half mile west some time ago, has been completed for 28 bbls. of oil and 11 bbls. of water, production coming from Burbank sand 2,815-33½ feet. It had been plugged back from 2,836 feet on account of a water showing.

Estimated Production

Estimated production by pool in Oklahoma for the week ending August 4 and for the preceding week follows:

	Barrels	
	Aug. 4	July 28
Allen	7,965	8,085
Blackwell district	4,900	5,000
Bristow-Slick	10,700	10,700
Cushing-Shamrock	14,600	14,600
Chandler district	8,000	7,000
Davenport	750	750
Healdton	9,300	9,250
Hewitt	4,950	4,950
Burbank	9,300	9,300
South Burbank	6,700	6,400
Balance of Osage	27,500	30,000
Lucien	5,820	6,070
Crescent	4,530	5,400
Marshall-Lovell	1,350	1,300
Bowlegs	8,890	11,445
Carr City	3,780	5,845
Earlsboro	8,040	10,635
East Earlsboro	8,160	10,610
South Earlsboro	1,185	1,015
Little River	12,415	14,825
East Little River	635	765
Seminole	10,135	11,435
East Seminole	995	1,045
Searight	1,640	2,205
Maud	1,100	1,200
Mission	2,485	3,255
St. Louis-Pearson	22,060	24,770
Cromwell	4,775	4,775
Papoose	1,250	1,250
Oklahoma City	96,705	154,595
Asher-West Asher	1,985	1,735
Tatums	6,500	6,500
Sholem-Alechem	4,400	4,400
Duncan	4,500	4,600
Tonkawa-Garber-Thomas	6,500	6,700
Fish	3,695	3,585
Konawa	2,185	2,250
Gray	2,070	2,125
Graham	3,750	3,750
Holdenville	5,100	3,165
Wewoka	4,500	4,500
Yale-Jennings	5,100	5,100
Other pools	61,280	64,847
Total	415,180	491,730

The Champlin Refining Co.'s No. 1 Parker, NW NE Section 22-25-6, found Burbank sand at 2,734 feet and at 2,760 feet flowed 211 bbls. the first 9 hours. It had not been completed.

The Texas Co. has completed its No. 11, C E half SE Section 30-25-8, Osage County, for 9 bbls. on the swab, production coming from the Bartlesville sand, logged at 2,472-77 feet. Total depth was 2,516 feet.

In the Naval Reserve Pool of Osage County, Champlin Refining Co. has completed its No. 6 Others, NE NW NW Section 16-24-7, for 257 bbls. in 21 hours, flowing its production after Bartlesville sand from 2,638-67 feet had been given a light shot of nitro. Total depth was 2,702 feet in shale.

Lewis Production Co. and Continental Oil Co.'s No. 6, SW SE SW Section 16-24-7, was being cleaned out after a shot of nitro had bridged the hole. Bartlesville sand found at 2,652-2,702 feet had filled the hole with 800 feet of oil.

Preparations were being made to shoot with 100 quarts of nitro Lewis Production Co.'s No. 3, NW SE Section 28-24-7, which swabbed 40 bbls. in 12 hours from Bartlesville sand 2,540-2,652 feet.

Osage County had three new locations starting up and three old wells scheduled for deepening. The list follows:

Phillips Petroleum Co. has staked a location in the NW NE Section 8-25-6, offsetting the Burgess sand producer of

Wildcat Operations in Oklahoma

Week Ending August 4

NORTHERN OKLAHOMA

ALFALFA COUNTY

Acre et al's No. 1 Acre, C SW NE Sec. 14-24-11w.
T.D. 6,460 ft.; lost tools and S.D.

BECKHAM COUNTY

Price and Watchorn O. & G. Co.'s No. 1 Hoard, NE SW Sec. 17-8-26w.
Drlg. 1,585 ft.

CADDO COUNTY

Denver Prod. & Ref. Co.'s No. 1 Noe, NW SW SW Sec. 24-10-10w.
T.D. 11,230 ft.; drill pipe stuck; opened July 29; made one flow 200 bbls.

CLEVELAND COUNTY

Phillips Pet. Co. et al's No. 1 Baker, C SE NW Sec. 11-9-2w.
T.D. 7,432 ft., Simpson dolomite; fishing.

COAL COUNTY

Moore & Deaner's No. 1 Edward, NW NE SE Sec. 27-2-8.
S.D. 4,970 ft.

J. D. Petty Oil Co.'s No. 1 McMillian, SW NW NE Sec. 16-1s-8e.
Machine.

GARFIELD COUNTY

Ross Cummings et al's No. 1 Gage, SE NW Sec. 27-22-3w.
Spudded and S.D.

GRADY COUNTY

Western Oil Co., Inc.'s No. 1 Carter, NW NE SE Sec. 32-3-7w.
Show oil 2,760-65 and 2,798-2,800 ft.; drlg. 2,900 ft.

GRANT COUNTY

Helmerich & Payne's No. 1 Crouse, C NE SW Sec. 29-25-8w.
Cellar.

W. Earl Witt et al's No. 1 Patton, SW SE Sec. 19-29-3w.
Cellar and pits.

HARPER COUNTY

Sinclair Prairie Oil Co.'s No. 1 Neff, NW SE Sec. 21-26-24w.
T.D. 265 ft.; S.D. for water.

HUGHES COUNTY

Dickison et al's No. 1 Webster, NW NE Sec. 22-10-10.
Location abnd.

J. B. Hill's No. 1-A Perkins, C W½ SW SW Sec. 7-5-9.
T.D. 1,075 ft.; S.D.

Olympic Oil Co.'s No. 1-A McClassen, SE NW NW Sec. 13-9-8.
Cromwell sand 3,433 ft.; T.D. 3,478 ft.; 40,000,000 ft. gas; flowed 799 bbls. in 41 hrs.

Olympic Oil Co.'s No. 1 McClassen, SE NW NW Sec. 13-9-8.
T.D. 600 ft.; lost tools; S.D.

Smith et al's No. 1 Farmer, SE NW Sec. 33-5-9.
Drlg. 650 ft.

Turner et al's No. 1 Williams, SW cor. Section 35-7-10.
Rig.

KAY COUNTY

Carter Oil Co.'s No. 1 Cline, SE SW SE Sec. 16-28-5.
Drlg. 2,393 ft.

KINGFISHER COUNTY

Jadeka Dev. Co.'s No. 1 Frakes, C SW NE SW Sec. 16-15-6w.
T.D. 5,112 ft.; S.D.

KIOWA COUNTY

Bailey & Johnson's No. 1-A Potts, CEL NW NW SW Sec. 31-7-14w.
T.D. 580 ft.; D.&A.

LEFLORE COUNTY

East Okla. O. & G. Co.'s No. 1 Metcalf, SW cor. Sec. 2-4-26.
Drlg. 1,603 ft.

Murdock et al's No. 1 fee, SW NE SW Sec. 15-5-25e.
T.D. 2,425 ft.; drlg. by tools.

LINCOLN COUNTY

Mid-Continental Oil Co.'s No. 1 Bolby, C SE SW Sec. 27-12-2.
Drlg. 550 ft.

L. G. Hulse's No. 1 Sloan, SW NW SE Sec. 19-17-3.
T.D. 885 ft.; S.D.

Texas Co.'s No. 1 Gessmann, SE NE Sec. 33-14-4.
Wilcox 4,999-5,002 ft.; H.F.W.; P.B. and ripped pipe around 3,800 ft.; flow 305 bbls. oil between 8-in. pipe and surface csg.; Cleveland sand 3,040-50 ft.; ripped csg.; est. 10,000,000 ft. gas; flowed 130 bbls. July 28; flowed 75 bbls. July 29; to rip pipe at 3,025 ft.

LOGAN COUNTY

W. N. Anthony's No. 1 Fruin, SE SW Sec. 4-16-1.
Wilcox 5,265-85 ft., T.D.; show gas; S.D.

Gypsy Oil Co. and Sinclair Prairie O. & G. Co.'s No. 1 Manning, C NW NW Sec. 3-17-4w.
Drlg. 190 ft.

McCLAIN COUNTY

Denver P. & R. Co.'s No. 1 Newburn, C SE SW Sec. 22-5-1.
T.D. 6,352 ft. in Wilcox sand; pulling pipe to abandon.

NOBLE COUNTY

Continental Oil Co.'s No. 1 Bennett, SE NW Sec. 19-26-1w.
T.D. 5,232 ft.; P.B. 5,078 ft.; bailing and cleaning out; small show oil.

Magnolia Pet. Co.'s No. 1 Crawford, SE NW Sec. 27-21-2.
Bartlesville 4,094-4,109 ft., dry; drlg. 4,593 ft.

Texas Co. et al's No. 1 Voss, SW NE SE Sec. 28-22-2w.
Wilcox 4,816-59 ft.; flowed 927 bbls. in 23 hrs.; second Wilcox 4,899-4,919 ft., T.D., water; P.B. to 4,880 ft.; flowed 1,622 bbls. from first Wilcox; completed.

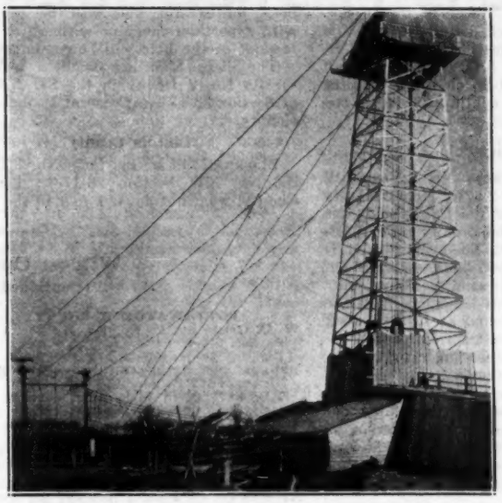
Vaughn Dev. Co.'s No. 1 Loula, NE SE SW Sec. 16-22-1.
Drlg. 2,494 ft.

OKFUSKEE COUNTY

Carter Oil Co.'s No. 1 W. H. Dill, C NW SE Sec. 2-11-8.
Set 8-in. csg. 3,374 ft.; T.D. 3,498 ft. in Cromwell sand; S.D.

(Continued on Next Page)

YOU don't need large quantities of WATER *to DRILL with* ELECTRIC POWER



Many wells that are shut down today because of lack of water could be drilling ahead if they were equipped to use electric power, because it eliminates the need for large quantities of water.

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OKLAHOMA GAS AND ELECTRIC COMPANY

Commercial Department

OKLAHOMA CITY OKLAHOMA

Indian Territory Illuminating Oil Co. in the NE NW, which was completed in 1933 for about 75 bbls.; Carter Oil Co. and Peters Petroleum Co.'s No. 2 Cook, NE cor. Section 9-25-6, location; Texas Co.'s No. 1 Copahy, CSL NE SE NE Section 29-25-8, old well drilling deeper. Old total depth 1,094 feet, rigging up; Texas Co.'s No. 2 Bennett, SW SE NW Section 12-23-7, rig on ground; Turman Oil Co.'s No. 18, CWL NW fourth Section 13-23-8, old well drilling deeper. Old total depth 2,173 feet, rigging up; Turman Oil Co.'s No. 5, C W half W half SW Section 11-21-8, old well drilling deeper. Old total depth 2,292 feet, rigging up.

Noble County-Polo Field

Texas Co. and others' No. 1 Voss, SW NE SE Section 28-22-3w, Noble County wildcat discovery of the Polo Field, was pinched in to 500 bbls. daily after a 24-hour gauge of 1,622 bbls. This well is to be allowed 15,000 bbls. of free oil. The second Wilcox sand produced only water and production is coming from the first Wilcox sand found at 4,816-59 feet. It was plugged back from 4,919 feet, total depth, to 4,880 feet and completed.

The operating agreement on the above well was to the effect that the Stanolind Oil & Gas Co. should take over the operation of the lease upon completion of the first well and the Stanolind is now rigging up rotary tools on No. 2 location in the NW NE SE of Section 28-22-2w.

Noble County-Lucien Field

Shell Petroleum Corp. and others' No. 4 Magney, C NW SW Section 17-20-2w, Lucien Field of Noble County, has been completed for 135 bbls. on the swab. First Wilcox sand was 5,104-58 feet and second Wilcox sand from 5,216-87 feet. Hole filled up to 3,000 feet with water coming from the second sand and well was plugged back to 5,277 feet and given several light shots of nitro at various depths in the first and second sand to yield the production.

Down in the south end of the Lucien Field and edging off to the west, Carter Oil Co. was getting a well in its No. 2 Henn, C SW SE Section 29-20-2w. First Wilcox sand was topped at 5,024 feet and it was being drilled ahead at 5,046 feet in sand with the well flowing 450 bbls. for the last gauge available.

Gypsy Oil Co.'s No. 1 Verna, C NE SE Section 29-20-2w, Lucien Field, was flowing 165 bbls. per hour from the first and second Wilcox sands topped at 4,945 feet and 5,069 feet respectively, bottom of the hole being 5,144 feet.

The Shell Petroleum Corp.'s No. 1 Henn "A," C NE SE Section 32-20-2w, south end of the Lucien Field, Noble County, had the first Wilcox sand from 4,957-5,010 feet and the second Wilcox sand from 5,080-5,111 feet, total depth, producing on swab 152 bbls. in 9 hours. It was given a 40-quart shot of nitro from 5,194-5,103 feet, increasing production from 17 bbls. to 24 bbls. per hour. It had not been completed.

The wildcat test 4 miles east of the Lucien Field, Continental Oil Co.'s No. 1 Bennett, SE NW Section 19-20-1w, Noble County, which was drilled to a total depth of 5,232 feet had been plugged back to 5,070 feet in Simpson formation and bailing and cleaning out was in progress. The first Wilcox sand from 5,106-16 feet had an estimate 500,000 feet of gas, and made several small flows of oil and water.

There were two new operations to start up in the northwestern part of the state during the past week. Helmerich & Payne's No. 1 Crouse, C NE SW Section 29-25-8w, Grant County, cellar; Sinclair Prairie Oil Co.'s No. 5 Wishard, CEL SE SE Section 12-22-4w, Garfield County, old well drilling deeper. Old total depth 1,575 feet, drilling out at 1,550 feet.

Logan County

Mid-Continent Petroleum Corp.'s and Shaffer's No. 1 Moss, SW SE Section 11-17-1w, Langston Pool, Logan County, which had Wilcox sand from 5,104-24 feet, total depth, flowing 593 bbls. in 24 hours, had cable tools rigged up and preparations were being made to clean out and then give it a shot of nitroglycerin.

Last reports available have it that the wildcat test of W. N. Anthony, No. 1 Fruin-Eckman, SE SW Section 4-16-1e, Logan County, has turned out to be a failure. A small show of oil and gas was had in Wilcox sand from 5,265-85 feet, total depth, and rotary tools have been moved out and will be replaced with a portable machine with which bailing out of the hole will be conducted.

The Texas Co. has made a location for its No. 2 Denny in the SE NE SE of Section 33-17-4w, Crescent Pool, Logan County.

Lincoln County

Blackwell Oil & Gas Co.'s No. 1 Ladd, SE NE NW Section 23-17-6e, Lincoln County, was shut down 1 foot in the Mississippi lime at 2,955 feet, with nothing reported showing.

First reports for Lincoln County for the last week include the following: Magnolia Petroleum Co.'s No. 5 Benedict, SW NW Section 7-14-4, Chandler Pool, building rig; Magnolia Petroleum Co.'s No. 7 Telford, NE SW SE Section 7-14-4, rig material on ground.

Creek County and Vicinity

H. D. Hambley's No. 1-A Hemming, NW SW Section 22-20-9, Pawnee County, was dry and abandoned 12 feet in the Mississippi lime topped at 2,410 feet. Burgess sand from 2,380-2,410 feet was also dry.

J. E. Abbott and others' No. 3 Allen, C S half NE NW Section 12-19-9, Creek County, got a small show of oil in the Wilcox sand found from 2,715-29 feet, total depth, but it was drowned out with a hole full of water and was abandoned.

Roy Dean's No. 3 Grayson, NW SE NW Section 3-18-8, Creek County, had Red Fork sand from 2,642-70 feet, total depth 2,681 feet, and was completed for 48 bbls. on swab after a shot of 120 quarts.

In the Olive Pool of Creek County, Magnolia Petroleum Co.'s No. 6 Street, SE SW NE Section 3-17-8, swabbed and flowed 256 bbls. in 24 hours from Layton sand logged at 1,385-1,414 feet, total depth, and it was completed.

C. W. Titus' No. 4 Casey, NW SW SE Section 3-17-8, Creek County, was completed for 135 bbls. on swab. Production is coming from the Layton sand from 1,300-39 feet, total depth, which had been given a 120-quart shot.

New operations starting up in Creek County and vicinity are as follows: Schauble & Breslyn No. 2 Clifton, NE SW NE Section 6-20-8e, Pawnee County, old well drilling deeper. Old total depth 2,600 feet, rigging up; Texas Co.'s No. 3 Jackson, SW NW Section 25-19-8, Creek County, location; G. P. Slater's No. 1 Field, SW SE Section 7-18-10, Creek County, location; Texas Co.'s No. 1 Goodin, SE NW NE Section 16-17-7, old well drilling deeper. Old total depth 2,711, drilling 2,760 feet; S. W. Anthony's No. 4 Muskogee, C NE NE Section 9-16-12, Creek County, old well drilling deeper. Old total depth 1,891 feet, rigging up; Sinclair Prairie Oil Co.'s No. 2 Davis, SE NW NW Section 9-13-10, Okfuskee County, location.

Oklahoma County

The Mid-Kansas Oil & Gas Co.'s No. 1 Dahl, near the town of Edmond, in the SE cor. Section 31-14-3w, Oklahoma County, which had the tools lost in the hole last week, should be in readiness to continue operations within the next few days as a head flow of mud brought the lost tools to top of the casing and they were hooked on to them. Due to the large volume of gas which has been estimated from 40,000,000 to 70,000,000 feet, this well will probably be completed with rotary tools. Total depth was 6,393 feet, 8 feet in saturated Wilcox sand.

Stanolind Oil & Gas Co. and Amerada Petroleum Corp.'s No. 1 Seuneram, NE cor. Section 6-13-3w, Oklahoma County, a south offset to the Mid-Kansas Oil & Gas Co.'s No. 1 Dahl mentioned above, was drilling at 6,607 feet, 19 feet in Wilcox sand and showing oil.

Near the town of Britton, Gypsy Oil Co. and others' No. 1 Grant, C SE NW Section 12-13-4w, Oklahoma County, was shut down for orders when a bailing test developed that a poor cement job was had at 6,818 feet, at which depth a test for production was being made. This well was a Wilcox sand failure at 7,482 feet.

Oklahoma City Field

In the north end of the Oklahoma City Field, Royalty Service Corp.'s No. 1 Simpson, SW NW SW SE Section 34-12-3w, Oklahoma County, was completed for 4,053 bbls. in 24 hours, with 10,000,000 feet of gas coming from Wilcox sand logged at 6,366-6,495 feet, total depth.

Westgate Oil Co.'s No. 6 Casey, 825 feet south and 685 feet east of Center of Section 34-12-3w, Oklahoma City Field, had 7-inch casing set on top of Wilcox sand logged at 6,327-6,473 feet, total depth, and it flowed 1,374 bbls. in 13 hours with 20,000,000 feet of gas. It was standing shut in.

Royalty Service Corp.'s No. 1 Ownbey, 80 feet north and 1,255 feet west of the SE cor. NE Section 22-11-3w, Oklahoma City Field, was completed for a potential of 221 bbls. in 4 hours with 2,500,000 feet of gas. A previous 24 hours' gauge was 971 bbls. Wilcox sand from 6,437-83 feet, total depth, was shot with 23 quarts.

Phillips Petroleum Co. and Shell Petroleum Corp.'s No. 7 Berg, NW SE SW Section 26-11-3w, Oklahoma City Field, gauged 214 bbls. in 1 hour on gas lift and was then shut in. Wilcox sand from

(Continued on Page 62)

Wildcat Operations in Oklahoma

(Continued from Preceding Page)

POTTAWATOMIE COUNTY

W. D. Grisso et al's No. 1-A Kenyon, C NE SE Sec. 3-8-4.
Rig.

Phillips and Gypsy Oil Co. et al's No. 1 Flynn, NE NW Sec. 17-6-3.
T.D. 4,325 ft. in Viola lime; running 8-in. csg.

Stanolind-Amerada's No. 1 Goodman, SW NE NE Sec. 5-10-4.
Earlsboro sand 4,405-53 ft., T.D.; prod. small amount of oil and lots of water.

SEMINOLE COUNTY

Harman Oil Co.'s No. 1 Bowlegs, SE NE SW Sec. 1-7-7.
T.D. 1,655 ft.; pulling pipe.

Harris and Haun's No. 1 Harjo, NE SE NW Sec. 11-6-6 (O.W.P.B.).
Old T.D. 2,935 ft.; ripped csg. 2,100-12 ft.; flow 133 bbls.; fishing tools.

Moran et al's No. 1 Brinlee, SW NE Sec. 27-6-5
Spudding.

Tate & Starbuck's No. 1 Heard, SE NW Sec. 9-6-7.
Drlg. 535 ft.

Wrightsman Oil Co.'s No. 1 Smith, NW SE Sec. 25-10-7
Cromwell 3,632-75 ft.; small show oil and water; drlg. 4,110 ft.

WASHITA COUNTY

Anadarko Basin Oil Co.'s No. 1 Wolf, NE SW Sec. 28-9-17w.
Rigged up and S.D.

Okla.-Midwestern Oil Co.'s No. 1 Dock, SW cor. Sec. 21-8-18w.
S.D. 2,400 ft. for csg.

SOUTHERN OKLAHOMA

ATOKA COUNTY

Brookshire et al's No. 1 Rowland, NW NE NE Sec. 18-3s-10e.
T.D. 2,695 ft.; fishing tools.

J. D. Boukan's No. 1 Howard, NW SW NW Sec. 20-2s-10e.
S.D. 1,135 ft.; machine moved out.

T. A. Edgerly's No. 1 Donham, SE NW Sec. 36-1-15e.
Rigging up.

L. A. Pitts' No. 1 Blankenship, NE cor. NW Sec. 19-3s-10e.
T.D. 651 ft.; S.D.

Malernee et al's No. 1 Greenville, N. B., NW SW Sec. 36-2s-13e.
Sand, show oil 2,128-35 ft.; T.D. 2,150 ft.; S.D.

T. C. Ramler et al's No. 1 Roberts, SW SE SW Sec. 6-2s-12e.
Drlg. 310 ft.

CARTER COUNTY

Carter Oil Co.'s No. 1 Bonner, SW SE SE Sec. 19-3s-2w.
Location.

Daphne Oil Co.'s No. 1 Hooks, SE NW NW SE Sec. 5-1s-2w.
Show oil 1,075-1,185 ft.; T.D. 1,350 ft.; S.D.

Hudson & Poland's No. 1 Sullivan, NE SE Sec. 5-5s-1w.
Sand 3,745-60 ft.; show oil; drlg. 3,900 ft.

McHenry et al's No. 1-A Ratliff, NW SW Sec. 28-1s-2w.
Sand 540-606 ft., T.D.; pumped 10 bbls. first 7 hrs. after 5-day shut-in.

CHOCTAW COUNTY

J. V. Scrivener et al's No. 1 Swink, C NE SE Sec. 29-4s-20e.
Set csg. 410 ft. S.D.

COMANCHE COUNTY

F. F. Stevens' No. 1 Green, SE SW Sec. 2-1-12w.
Drlg. 1,200 ft.

Holden & Taylor's No. 2 Crutcher, C NE Sec. 11-1n-13w.
S.O.&W. 650 ft.; drlg. 668 ft.

GARVIN COUNTY

National Prod. Co.'s No. 1 Littrell, NE cor. Sec. 31-3n-3w.
S.D. 351 ft.

JACKSON COUNTY

Gypsy Oil Co.'s No. 1 Johnson, SE NW SW Sec. 11-1-20w.
Moving in rotary.

Gypsy Oil Co.'s No. 1 Kelly, NE cor. Sec. 10-1n-20w (O.W.; P.B.).
Old T.D. 2,934 ft.; P.B. 1,688 ft.; sand 1,680-88 ft.; 22 bbls. oil in 6 hrs.; abnd.

Gypsy Oil Co.'s No. 1-A (Twin) Kelly, NE cor. Sec. 10-1n-20w.
Rigging up core drill machine.

Ben Russell et al's No. 1 Unknown, NW SE Section 20-1-22w.
Drlg. 800 ft.

JEFFERSON COUNTY

Geo. Pace et al's No. 1 Jack, NE NW NW, Sec. 10-4s-4w.
Gas show 1,510-12 ft. and 1,804-18 ft.; T.D. 1,869 ft.; S.D.

JOHNSON COUNTY

Okla. Oil Corp.'s No. 1 Tubbi, SW NE SE Sec. 11-2s-8.
At 2,961 ft. est. 1,000,000 ft. gas; 2,150 ft., H.F.W.; Hunton lime 2,445-50 ft., T.D.; S.D.

MARSHALL COUNTY

Nunn and Stinnett's No. 1 Lindecker, NW cor. Section 7-8s-6e.
Drlg. 425 ft.

Paul Robb's No. 1 Vittetoe, C NE SE Sec. 11-5s-4e.
T.D. 4,937 ft.; S.D. for wtr.

MURRAY COUNTY

Ed. Galt et al's No. 1 Aetna Life Ins. Co., SE NW NW NW Sec. 14-2s-3e.
Location; tools on ground.

Glicrease Oil Co.'s No. 1 Brown, SW cor. Sec. 36-1n-2e.
Sand (Wilcox?) 1,724-38 ft.; T.D. 1,742 ft.; fishing.

T. E. Revell et al's No. 1 Wolfe, NE cor. Sec. 18-1-2.
T.D. 2,545 ft.; 1,500 ft. water in hole; S.D.

STEPHENS COUNTY

Carter Oil Co.'s No. 1 Hildebrand, C SW SE NE Sec. 1-3s-7w.
Sand 2,051-53 ft.; small show oil; drlg. 2,940 ft., green shale.

Carter Oil Co.'s No. 1 McCasland, C NW NW SW Sec. 32-1s-4w.
Rig up.

J. W. Madison's No. 1 Tussey, SW SE NW Sec. 24-1n-4w.
S.D. 3,220 ft.

TILLMAN COUNTY

J. H. Everett's No. 1 Crane, SW cor. Sec. 15-3s-14w.
Rig

Delton Oil Co.'s No. 1 Fixico, SE cor. Sec. 7-11-8.
Drlg. 4,290 ft. in Sylvan shale.

OKLAHOMA COUNTY

Gypsy Oil Co. et al's No. 1 Grant, C SE NW Sec. 27-13-4w.
Wilcox 7,472-82 ft., T.D.; plugged back to 6,818 ft. to test; poor cement job; S.D.

Springrose Drlg. Co.'s No. 1 Edwards, C SE Sec. 19-11-1.
T.D. 6,540 ft.; 400 ft. drill pipe in hole.
S.D.

OSAGE COUNTY

Peters Pet. Co. and Norbla Oil Co.'s No. 1, SW cor. Sec. 15-26-5.
S.D. 1,712 ft. for wtr.

Empire O. & R. Co.'s No. 1, SE NE Sec. 2-25-5.
Bartlesville sand 3,356-68 ft., broken and dry; chat 3,443-70 ft., dry; Miss. lime, 3,470-80 ft.; Hominy-Wilcox zone 3,810-22 ft.; T.D. 3,824 ft.; 4 bbls. water per hour; S.D.

PITTSBURG COUNTY

Arkhoma's No. 1 Cummings, NW NE SE Sec. 6-4-12.
T.D. 1,490 ft.; fishing.

Exchange Drlg. Co. et al's No. 1 Chunn, SE NW Sec. 29-4-14.
T.D. 350 ft.; waiting for csg.

W. E. Halley's No. 1 Drew, NW SW Sec. 21-3-14.
S.D. 190 ft.

Moffett & Hall's No. 1 Jones, C NE NW Sec. 14-5-14.
Lost tools; T.D. 3,210 ft.; S.D.

POTTOTOC COUNTY

E. M. Blanchard's No. 1 Crabtree, NE SE NE Sec. 27-2-6.
S.D. 2,930 ft.

Boyle et al's No. 1 Newbern, SW NE Sec. 21-5-4.
T.D. 3,237 ft.; hole full sulphur wtr.; S.D.

Emanuel, Rudman & Hatcher's No. 1 Mayer, SW SE NW Sec. 7-3-8.
S.D. 1,525 ft.

Jarrett Pet. Co.'s No. 1 Johnson, SE NW Sec. 28-4-4.
T.D. 1,269 ft.; S.D. for water.

Dandridge et al's No. 1 Stafford, NW cor. Sec. 5-1-4e.
T.D. 880 ft.; S.D.

Gillette & Kroeger's No. 1 Duver, NW SE Sec. 26-1n-6e.
Drlg. 400 ft.

Riddle et al's No. 1 Barnes, SE NW SE Sec. 21-5-4.
T.D 2,910 ft.; S.D. for water.

Southern Oil Corp's No. 1 Ladd, C NW NW Sec. 27-3-7.
Cellar.

Kansas Starts New Month With Production Down to August Allowable, 131,200 Barrels Per Day

By JAMES McINTYRE

The allowable production of crude oil in Kansas in August will be an average of 131,200 bbls. per day and producers started off with a crude output no greater than the allowable. The average for the week ending August 4 was 132,160 bbls. per day, but a part of this was produced under the old allowable of 134,500 bbls. per day.

Reports for the past week in the many fields in the state brought out nothing of a sensational character. The hot dry weather is slowing down rotary drilling in some cases but there appeared to be no let down in the number of completed and early completed wells reported.

Estimated Production

Estimated daily average production of Kansas in the week ending August 4 and in the preceding week follows:

	August 4	July 28
Hollow	9,650	9,800
Ritz-Canton	14,725	14,805
Voshell	6,615	6,965
Johnson	1,835	1,885
Sedgwick County	7,100	7,150
Nikkell	6,795	7,335
Ellsworth County	2,205	3,750
Barton County	1,650	1,235
Rice County	13,780	15,173
Reno County	5,490	6,450
Ellis County	580	560
Kingman County	1,615	1,625
Stafford County	2,120	1,510
Russell County	8,160	8,995
Greenwood County	12,700	13,700
Butler County	20,100	19,900
Other pools	17,040	17,517
Total	132,160	136,755

Rice County

Rice County came through with three new operations and locations which are listed herewith: The Texas Co.'s No. 5 West, SE NW NW Section 21-20-10w, location; Shell Petroleum Corp.'s No. 1 McFarland, SE NW Section 7-20-9w, building rig; Yingling and others' No. 1 Maupin, NW SW SW Section 1-18-8w, a wildcat test, rigging up.

Another dry hole was chalked up for The Texas Co. in its No. 3 McFarland, SE SW Section 7-20-9w, Sharpe Pool of Rice County, when the Siliceous lime from 3,297-3,347 feet, total depth, failed to respond satisfactorily to acid treatment and a nitro shot. The No. 2 McFarland was completed as a dry hole just recently.

It looks like a pool extensioner is had in the Empire Oil & Refining Co.'s No. 7 Heckel, NE SW SW Section 18-20-9w, Sharpe Pool of Rice County. Siliceous lime found at 3,338-41 feet, total depth, filled the hole with 1,700 feet of oil and 100 feet of water in 4 hours. It was plugged back to 3,340 feet at which depth the hole filled up 3,150 feet with oil. It had not been given a production test.

James Davis' No. 1 Katterjohn, SW cor. Section 13-19-10w, Brandenstein Pool of Rice County, had 1,000 feet of oil in the hole with a show of water and swabbed 1 bbl. of oil per hour on a short test. Production is coming from the Siliceous lime at 3,293-3,314 feet, total depth.

National Refining Co. and others have acidized their No. 4 Sherman, SW SE SW Section 16-19-9w, Beyer Pool of Rice County, and the well is shut in awaiting results. It had pumped 12 bbls. on a 4-hour test, production coming from Siliceous lime at a total depth of 3,252 feet.

Ramsey and others' No. 3 Ira, C S half NE NW Section 32-19-3w, Chase Townsite Pool of Rice County, was given a shot of acid to yield 32 bbls. per hour on the swab. Siliceous lime was had from 3,300-04 feet.

In the Ritz-Canton Pool, Olson Drilling Co. and Shell Petroleum Corp.'s No. 1 Russell, C SE SE Section 3-19-2w. McPherson County, an old well drilled deeper from 2,956 to the Viola lime 3,409-10 feet, which carried water, had been plugged back to the original producing horizon to produce an estimated 2,000,000 feet of gas with a show of water. It was not a completion.

Shell Petroleum Corp.'s No. 5 Giffin "A," SW SE NW Section 14-19-2w, McPherson County, potentialed 585 bbls. of oil from acidized Viola lime found at 3,369-81 feet, total depth. It was a completion.

Helmerich & Payne Drilling Co. and Shell Petroleum Corp.'s No. 5 Russell "C," SW NE Section 23-19-2w, McPherson County, found the chat from 2,895-2,951 feet, total depth, good for a potential gauge of 243 bbls. It was completed.

Gleason and others' No. 1-B Hamilton, NW SW SW Section 28-19-1w, McPherson County, which was a failure in the Viola lime at 3,476 feet, total depth, had been plugged back to the chat formation topped at 2,958 feet, but was abandoned when that horizon also failed to produce oil in sufficient quantities.

Derby Oil Co. deepened its No. 1 Hamm, SE NW Section 33-21-3w, Nikkel Pool of McPherson County, from an old total depth of 3,476 feet, basing Hunton lime at 3,481, and quitting at 3,502 feet. It pumped 1,262 bbls. of oil and 27 bbls. of water for its new potential.

Derby Oil Co. deepened its No. 2 Hamm, SW NE Section 33-21-3w, Nikkel Pool of McPherson County, from an old total depth of 3,460 feet, to 3,488 feet, basing Hunton lime at 3,461 to pump 1,492 bbls. for its new gauge.

Derby Oil Co. deepened its No. 4 Hamm, SE S WNE Section 33-21-3w, Nikkel Pool of McPherson County, for a new potiential of 1,646 bbls. on the pump. It was deepened from 3,453 to 3,470 feet, total depth, basing the Hunton lime at 3,454 feet.

J. H. Miller and Stanolind Oil Co. and Amerada Petroleum Corp.'s No. 5 Flock, NE NW Section 1-20-2w, was a new operation for the week. Rig was being built; Wolf Creek Oil and others' No. 2 McMurray, SE NE NE Section 1-20-2w, was a cellar; Alley & Woodward's No. 1 Jones, NE SE NE Section 9-19-2w, cellar.

Harvey County

Mid-Kansas Oil & Gas Co.'s No. 9 Duerkson, NW NE NE Section 19-22-3w, Hollow Pool of Harvey County, potentialed 100 bbls. in 24 hours, production coming from the Hunton lime from 3,425-59 feet. It was completed at a total depth of 3,473 feet. Hunton lime had been acidized.

Sinclair Prairie Oil Co.'s No. 3 Ediger, NE SE SW Section 19-22-3w, Hollow Pool of Harvey County, which was formerly completed in the Hunton lime at a total depth of 3,365 feet, has been deepened to the Wilcox sand found at 3,491-3,535 feet, total depth, and it swabbed 30 bbls. in 20 hours. It had not been completed.

The Skelly Oil Co.'s No. 2 Martens, 400 feet north and 255 feet west of the SE cor. Section 19-22-3w, Harvey County, has been deepened from 3,484 feet to a total depth of 3,500 feet, to yield 35 bbls. in 15 hours on the pump. It was completed.

Two new operations started in Harvey County the past week, Stanolind Oil & Gas Co. and Amerada Petroleum Corp. taking the credit for both. They were Stanolind Oil & Gas Co. and Amerada Petroleum Corp.'s No. 3 Froese, SW NW NW Section 20-22-3w, Hollow Pool, old well drilling deeper. Old total depth 3,493 feet, deepened to 3,520 feet and getting ready for a test of production; same companies' No. 4 Froese, NW cor. Section 20-22-3w, rigging up.

Reno County

The National Union Oil Co.'s No. 1 Ackley, C SE SE Section 14-23-4w, Burrton Pool of Reno County, had an estimated 20,000,000 feet of gas coming from the chat at 3,330 feet, total depth. They were preparing to run the 5-inch casing.

Olsen Drilling Co. and Shell Petroleum's Corp.'s No. 5 Roberts, C SE SW Section 25-23-4w, Burrton Pool of Reno County, was completed for a potential gauge of 322 bbls. in 24 hours, production coming from the chat logged at 3,260-3,371 feet, total depth.

Sinclair Prairie Oil Co.'s No. 5 Base, S SW SE Section 26-23-4w, Burrton Pool of Reno County, topped the chat at 3,229 feet and at 3,372 feet, it flowed 175 bbls. of oil and 200 bbls. of water in 15½ hours. It was not a completion.

Reno County had four new operations which are listed as follows: Stanolind Oil & Gas Co. and Amerada Petroleum Corp.'s No. 1 Hilger "B," SW NE Section 16-26-4w, location; Hartman Oil Co. and others' No. 1 Stone, C NW NW Section 15-24-4w, a wildcat test, building rig; Study-Frost and others' No. 2 White, SW SE SE Section 2-23-4w, cellar; Derby Oil Co.'s No. 1 Ackley, NE NW SE Section 14-23-4w, cellar.

Sedgwick County

E. B. Shawver and others' No. 1 Russell, SE cor. Section 17-28-1e, Sedgwick County, flowed 208 bbls. of oil in 8 hours with an estimated 7,000,000 feet of gas. Production is coming from the Mississippi lime logged at 3,064-3,101 feet. It was not a completion.

Phillips Petroleum Co.'s No. 1 Nolan, NW cor. Section 21-28-1e, Sedgwick County, was completed for 688 bbls. of oil and 3,000,000 feet of gas, production coming from the chat at 3,050-3,105 feet, total depth.

Aylward & Corn's No. 1 Heck, NW SW Section 2-27-14w, Sedgwick County, was dry and abandoned at 3,619 feet, total depth, 8 feet in Seliceous lime with a hole full of water.

Bar-Key Petroleum Co.'s No. 1 Swanson, C NE fourth Section 6-26-2e, Sedgwick County, pumped 68 bbls. in 4 hours from the chat found at 2,976-82 feet, total depth. It was shut down for repairs.

Sedgwick County had one first report in Ted Spencer's No. 1 Underwood, NW cor. Section 26-25-1w, building rig.

Rush County

The Mid-Kansas Oil & Gas Co.'s No. 1 Mohr, C NW fourth Section 10-18-

(Continued on Page 78)

Wildcat Operations in Kansas

Week Ending August 4

(Descriptions are East unless marked otherwise)

BARBER COUNTY

Indian Territory Illuminating Oil Co.'s No. 1 George, C SE SW Sec. 12-33-16w. Drlg. 3,450 ft.

Lario O. & G. Co.'s No. 1 Whelan, C NW Sec. 32-31-11w. Chat 4,355-4,435 ft.; 3,500 ft. oil in hole, 1,000,000 ft. gas; flows every hour.

BARTON COUNTY

Atlantic O. P. Co.'s No. 1 Straub, C SE NW Sec. 36-18-11w. Siliceous 3,286-3,313 ft., T.D.; 2 bbls. oil per hour with show water; P.B. 3,310 ft. and acidizing.

Gypsy Oil Co. and Atlantic Prod. Co. and Shell Pet. Corp.'s No. 1 Batchman, C SW NE Section 18-20-12w. Spudding.

Harris & Haun and J. Brook's No. 1 Dietz, NE SW Sec. 21-16-15w. Drlg. 1,810 ft.

Murphin and Downing's No. 1 Lanterman, NW SE Sec. 15-19-11w. Rig timbers.

National Ref. Co.'s No. 1 Ingersoll, C NW NE Sec. 2-19-13w. T.D. 1,842 ft.; S.D.

Walter Shearen et al's No. 1 Kempler, SE NE NE Sec. 31-18-11w. S.D. 300 ft.

CLAY COUNTY

Seidel Bros.' No. 1 Youkers, C 8½ SE NW Sec. 21-9-4. S.D. 920 ft.

COWLEY COUNTY

National Refining Co.'s No. 1 Robinson, NE SE NE Section 11-34-4. Fishing 1,470 ft.

Otstot et al's No. 1 Eckhardt, SE NW Sec. 15-35-6. Bldg. rig.

Roth & Parout's No. 1 Fox, SE SW Sec. 25-30-7. Drlg. 2,244 ft.

Wakefield et al's No. 1 Weigle, NW SE SE Sec. 6-32-6. Bldg. rig.

DICKINSON COUNTY

Dutch Oil Co.'s No. 1 Phillips, C NE NW Sec. 18-15-1e. T.D. 2,025 ft.; S.D.

ELLIS COUNTY

Ashby et al's No. 1 Mermis, NW cor. NE Sec. 24-13-16w. Spudded and S.D.

ELLSWORTH COUNTY

Elwell et al's No. 1 Campbell, SW cor. Sec. 20-17-7w. Drlg. 325 ft.

GREENWOOD COUNTY

Greeley et al's No. 1 Satler, SW SE SW Sec. 28-25-12. Drlg. 325 ft.

HARPER COUNTY

R. G. Berry's No. 1 Anthony, C SW SW Sec. 17-31-8w. S.D. 4,475 ft. in Mississippi lime for fuel.

HARVEY COUNTY

Hollow et al's No. 1 Swafford, NW NE NW Sec. 8-22-1w. Drlg. 2,365 ft.

Wenzel et al's No. 1 Schrag, NW SE Sec. 24-22-3w. Rig.

KINGMAN COUNTY

W. C. McBride, Inc.'s No. 1 Wolbridge, NW SE Sec. 14-27-7w. Drlg. 2,450 ft.

McPHERSON COUNTY

Marlleen Oil and Goering Bros.' No. 1 Decker, NW cor. SE Sec. 20-18-1w. Kansas City lime 2,253 ft.; drlg. 3,280 ft.

Tom Palmer and Phillips Pet. Co.'s No. 1 Moddelmog, NE NE NW Sec. 8-21-1w. Rigging up.

OSAGE COUNTY

Jim Edwards' No. 1 Detrich, C NW SE Sec. 21-14-15. Machine.

OSBORNE COUNTY

Carmen & Hershey's No. 1 Fritz, C NE NE Sec. 9-10-14w. S.D. 700 ft.

RENO COUNTY

Foraker et al's No. 1 Hiett, SE SW NE Sec. 34-24-4w. Ponds and cellar.

Hartman Oil et al's No. 1 Stone, C NW NW Sec. 15-24-4w. Bldg. rig.

L. H. Wentz' No. 1 Metcalf, SE NE SW Sec. 2-24-7w. Top Lansing 3,061 ft.; drlg. 3,445 ft.

Sinclair Prairie Oil Co.'s No. 1 Shepard, SE cor. NW Sec. 22-26-9w. Siliceous lime 4,323-43 ft.; 2,500 ft. W.I.H.; T.D. 4,364 ft.; running 4-in. liner; to D.D.

RICE COUNTY

Darby Pet. Co. et al's No. 1 Taylor, NW SE SW Sec. 25-19-8w. Drlg. 200 ft.

Deitrick et al's No. 1 Fitzpatrick, C NE NE Sec. 36-21-8w. Drlg. 2,692 ft.

Gypsy Oil Co.'s No. 1 Gibson, SW NW NE Sec. 4-21-10w. Rigging up.

Elwell et al's No. 1 Porter, NE NW Sec. 5-18-7w. Drlg. 985 ft.

Reserve Dev. Co.'s No. 1 Heins, NE SW SE Sec. 8-18-10w. Siliceous lime 3,256-69 ft., T.D.; show oil and water; P.B. 3,195 ft. in K.C. lime; acidized, prod. 15 bbls. day, comp.

(Continued on Page 73)

Get Good Well in Clay District, West Virginia; Twenty-Seven Completions in Eastern Field

By STAFF CORRESPONDENT

PITTSBURGH, Pa., Aug. 6.—About a mile and a half northwest of Ellenboro, Clay district, Ritchie County, West Virginia, in the lower end of the old Pike Pool, another well was completed among the close mass of rigs standing in that local excitement. Cottrell and others, drilling as the Pike Oil Trust, completed a second well on the M. S. and Lillie Riggs farm in the Big Injun sand showing for 50 bbls. a day.

In this district, Smith & Rexroad are moving in the material on the C. O. Delancy lease. Smith & Hendershot are rigging up on the Charles Wilcox lease. S. C. Mackey and others are drilling at 735 feet on an offset to this farm. Smith & Hendershot have part of the material ready on the Charles Wilcox, Sr. lease. C. G. Smith and others have started drilling on the Lona McDonald lease. About 800 feet west of the Earl Wilcox well, Lucas & Mahany have started drilling on the Earl Cunningham farm.

There were a fair number of completions in the lower Eastern Field during the week. Twenty-seven wells were completed among which were 20 producers with an initial production of 337 bbls. and seven gas wells. There were also only two dry holes, both tests. The majority of the new production was in Southeast Ohio.

SOUTHEASTERN OHIO

In Ashland County, in the NE of Section 34, Mochican Township, C. H. Meltzer and others completed No. 8 on the Aber and Alexander lease in the Berea sand at 771 feet. It produced 30 bbls. the first time it was pumped. In Lake Township, First National Bank of Newark, Ohio, completed a test on the A. J. McClure farm in the SW of Section 10. It was drilled in the Berea sand at a depth of 575 feet and is showing for 300,000 fet of gas a day. In the same quarter section, same operators drilled No. 2 in this formation at a depth of 565 feet on this farm. It has only 25,000 feet of gas a day and will make a 1-bbl. pumper.

In Columbiana County, L. A. Hoffman completed a test on the M. A. Whitter farm in the NE of Section 28, Knox Township. It is a Berea sand well at a depth of 770 feet and produced 15 bbls. the first day, natural, which was improved by shot to 20 bbls. a day.

In Jefferson County, J. M. Elliott & Co. drilled a test on the Oscar Strickard farm in the SW of Section 23, Island Creek Township. It went through the Berea sand to a depth of 1,400 feet and proved dry.

In Knox Township, Pure Oil Co. completed a fair well as a test on the B. R. Basim farm in Section 22, Union Township. It was drilled in the Clinton sand at a depth of 3,165 feet and produced 50 bbls. the first day after shot.

In Licking County, J. A. Upham completed No. 3 on the C. M. Babcock farm in Section 17, Fallsbury Township, in the Clinton sand at a depth of 2,987 feet. It produced 80 bbls. the first time it was pumped. In Section 14 of this township, E. C. Wright, trustee, completed No. 3 on the J. N. Freese heirs farm in the Clinton sand at 2,970 feet. It produced 30 bbls. the first day after shot. In Perry Township of this county, Blue Rock Oil & Gas Co. completed No. 3 on the Jackson Hoyt farm in the Berea sand at 727 feet. It produced 7 bbls. the first day after shot, and shows for a 3-bbl. pumper. It is in Section 17. In Section 16, same township, Preston Oil Co. completed a second test on the G. C. Mank farm in the Berea sand at 700 feet. It is a gas well gauging 58,000 feet a day with a light showing of oil.

In Medina County, E. R. Edson & Son Co. completed No. 50 on the Ed G. Miller farm, tract 15, Lot 12, Chathham Township, in the Berea grit at a depth of 496 feet. It made 3 bbls. the first day after shot. In this township but tract 13, Lots 3 and 2, Oko Oil & Gas Co. completed No. 64 on the Henry Essig farm in the same formation at 485 feet. It produced 2 bbls. the first day after shot.

In Muskingum County, Pure Oil Co. completed No. 3 on the F. H. McKee farm in the SW of Section 6, Jackson Township. It was drilled in the Clinton sand at a depth of 3,156 feet and produced 17 bbls. the first day after shot. Before shot, it made less than a barrel the first day.

In Noble County, in the SE of Section 18, C. W. Rich and others completed No. 3 on the J. K. and William Laughlin farm in Seneca Township. It is a Berea grit well at 1,516 feet and produced 1 bbl. the first day natural and 2 bbls. after shot. It is within well defined limits and will probably be a 1½-bbl. pumper.

In Perry County, there were two fair shallow gas wells which will stimulate activity. In the SE of Section 13, Reading Township, Mid East Gas Co. completed a test on the W. W. Porter farm in the Berea sand at 940 feet. It has a volume of 400,000 feet a day and if it blows down, the test will be drilled to the Clinton sand. In Section 9 of the same township, Ohio Fuel Gas Co. completed a test on the Blanche Shaugh farm in the same formation at 913 feet. It gauges at 586,000 feet a day.

In Washington County, Section 16, Salem Township, Pearl Sexton and others completed a test on the E. W. Huffman farm in a stray sand at 690 feet. It produced 4 bbls. the first day after shot.

In Wesley Township, C. P. and J. V. Bowman completed No. 45 on the J. V. Bowman farm in the Peeker sand at 353 feet. It is making about a half barrel a day. In the same section and on the same farm, these operators completed No. 46 at 356 feet, same sand. It is about the same size.

WEST VIRGINIA

There were five additional producers completed in West Virginia during the week, one of which was fair. In Roane County, Henderson Oil Co. drilled No. 1 on the E. S. Ball farm from the Cow Run sand, 1,165 feet, where there was about 15 bbls. a day, to the Salt sand at 1,735 feet. It is showing for 30 bbls. a day in this formation. It is about 300 feet east of the F. H. Bee farm No. 1 in Curtis district.

In Ritchie County, South Penn Oil Co. completed No. 15 on the Haught Lambert farm in Murphy district on Dutchman Run. It was drilled in the salt sand at 1,898 feet and is showing for 5 bbls. a day. In this district on Leatherbark Creek, Lewis Gas Co. and Litten Gas Co. completed a test on their own 1½ acres in the salt sand at 1,634 feet. It is good for 1 bbl. a day with only 6 feet of pay.

In Wirt County, Southern Oil Co. completed No. 21 on the M. Richter heirs' farm in Burning Springs district in the salt sand at 1,763 feet. It is good for 2 bbls. a day. In the same district, Glen Roberts completed No. 4 on the G. W. Roberts farm in the Big Injun sand at 1,725 feet. It will make a half barrel pumper.

Gas Wells

In Cabell County, West Virginia Gas Co. completed a second well on the John J. Porter farm in McComas district in the Maxon sand at 1,527 feet. It gauges 413,000 feet of gas a day.

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In Jackson County, H. F. Parsons and others drilled a test on the W. L. Kelly farm in Washington district through the salt sand to a depth of 1,609 feet. It proved dry.

In Pleasants County, Tate and Patterson completed a test on the David M. Dye farm in Washington district in the Maxon sand at a depth of 1,512 feet. It has a volume of about 300,000 feet of gas a day.

In Wetzel County, Wiser Oil & Gas Co. brought in a fair well on the Melvina Baxter farm in Proctor district. It was a test and has a volume of about 600,000 feet a day in the Maxon sand at a depth of 1,919 feet.

Drilling in West Virginia

There is additional new work started in West Virginia. In Boone County, Owens Bottle Co. has a rig standing for No. 20 on the Peytonia Coal Land Co. in Sherman district, and the tools ready for No. 2. Location for No. 22 has been staked out. In this district, Pure Oil Co has reached 2,453 feet in No. 67 on the Federal Coal Co. lease and 1,667 feet in No. 68. On the A. M. Prichard lease, the company has started drilling a second test. In this district, Godfrey L. Cabot, Inc., is fishing for the tools in No. 3 on the J. Q. Dickinson farm at 2,451 feet. This operator's No. 53 on the Federal Coal Co. tract, same district, is in the sand at 3,316 feet and testing.

In Cabell County there are no new locations. In McComas district, R. H. Adkins and others have reached 2,975 feet on the C. P. Rousey farm. H. H. Baker Gas Co. is down 600 feet in No. 2 on the Augusta Beckett farm. On the Alifair Adkins farm, West Virginia Gas Co. is drilling at 1,540 feet. In Barboursville district, United Fuel Gas Co. has reached 700 feet on the J. W. Starker farm, No. 2.

In Calhoun County, Carroll and Hamilton have started drilling on the Carl and Robert Knotts farm in Washington district. Jackson and Bowers have started drilling on the Charles White farm. In Lee district, F. F. McIntosh is building a rig for No. 5 on the Mary E. Hays farm. In Sherman district, Carnegie Natural Gas Co. has started drilling No. 3 on the R. F. Bennett farm. In this district, Godfrey L. Cabot, Inc., has reached 2,270 feet in drilling deeper No. 9 on the W. T. Rafferty farm. H. B. Scott is cementing at 1,960 feet on the P. Fling heirs' farm. Kenny M. Hunt and others are drilling on the Glen Wilson farm and have reached 1,340 feet. L. P. Bickel has finished the rig for No. 15 on the Martha Stump heirs farm. In Sheridan district, Bickerstaff and others have reached 1,880 feet on the William Cooper farm, No. 4, and shut down testing.

In Clay County, South Penn Oil Co. has completed rig for No. 108 on the O. D. Stockley farm in Henry district about 610 feet south of No. 24, same farm. The tools are being moved in. Across the line in Geary district, Roane County, United Fuel Gas Co. has started drilling No. 4392 on the S. C. Ross farm and Everett Starcher and others have built a rig on the J. N. Harold farm.

In Doddridge County, Hughes River Oil & Gas Co. have built a rig on the C. P. Broadwater farm in southwest district. In McClellan district W. D. Gribble has started drilling a second test on the M. J. Smith farm.

In Gilmer County, Chartiers Oil Co. started drilling No. 3 on the Bailey Stump

(Continued on Page 73)

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TULSA, OKLA.

Among Gulf Coast Drilling Contractors

Carlisle and Williams, with headquarters at Livingston, Tex., are moving a rig to Port Barre, St. Landry Parish, Louisiana, to drill a well for the Phillips Petroleum Co.

Harvey & Rush are setting up a rig to drill for the Kirby Petroleum Co., on the south line of Polk County, adjacent to the Hardin County line, in the Stephenson Survey.

W. V. Bowles has a rig running for the Continental Oil Co. at Citrus Grove, Matagorda County, and another drilling for the Texas Co. at Manvel.

Smith & McDannald have a new location to drill for the Tide Water Oil Co. in the London area, Rusk County.

C. & R. G. Drilling Co. has experienced unusual difficulty in obtaining sufficient water to carry No. 1 Truska, being drilled for the Gillock Petroleum Co., H.T.&B.R.R. Survey, Brazoria County, on down. An 800-foot water well failed to supply sufficient water, so the main hole was carried to 1,024 feet with an eye out for a good water sand. At this depth it was impossible to proceed for lack of water, so the company is now drilling four 35-foot wells in a shallow sand, in the hope of obtaining enough water from the combined wells to complete the well. Lack of water in the sands encountered indicates an upthrust of considerable interest.

George Echols, following several completions in the past several days, has eight rigs running at this time as follows: One for the Humble Oil & Refining Co. at Greta; one for the Houston Oil Co. at Refugio; one for the Continental Oil Co. in the Odom Field; one for the Sun Oil Co. and Magnolia Petroleum Co. near San Diego, Duval County; one for the Sun Oil Co. in Jim Hogg County; one for the Sun Oil Co. in the E-2 Guerra Pool in Starr County; one for the Circle-W Oil Corp. in Starr County; and one for the Jeffries Oil Co., a wildcat, on a seismograph geophysical prospect blocked by the Shell Petroleum Corp. in Duval County, to be carried as No. 1 Garcia.

Turnbull & Irwin are 2,100 feet deep on a new wildcat well for themselves, 12 miles northwest of Beaumont, in the J. Dyches Survey. This well was spudded July 27.

Carl B. King has two new locations to drill in East Texas, one for the Dyck Oil Co. and others, and one for the Petroleum Marketing Co. Mr. Kings is one of the contractors now concentrating in the Gulf Coast who plans to spend several days attending the Diamond Jubilee festivities at Titusville, Pa., commencing August 24. He will go by plane from Texas.

Frank Long, after considerable delay occasioned by the recent Gulf Coast storm, has set surface pipe at 1,000 feet in a well for the Amerada Petroleum Corp., near Port Lavaca, in Calhoun County.

Smith & McDannald are preparing to drill No. 1 Shaw for the Tide Water Oil Co. in East Texas. Same company is also rigging up to drill No. 1 Stidham at Louise for the Pure Oil Co.

L. W. Capps has resumed drilling on a well for S. J. Sloane and others near Brookshire, Tex., which has been shut down waiting for orders. Same contractor has also resumed drilling on No. 1 Westmoreland, located in a suburb of Houston, which was shut down at 6,031 feet. This well will be carried to the Cockfield formation.

Carl B. King is reported to have ordered a fur-lined bathtub as a reward to Fred W. Warner, tool pusher in charge of his rig which is drilling a well on the Welder ranch, near Sinton, Tex., for the Petrol Corp. High water and an 80-mile wind on the night of July 25 caused the drilling crew to take to cover, but at the height of the storm Mr. Warner is reported to have waded out to the rig in water waist deep, pulled 5,100 feet of drill pipe off bottom to put the weight on the crown block, and then to have retired until the storm abated somewhat. Weight of the pipe held the derrick standing, when eight other derricks in the vicinity went down.

W. Claud Smith has one rig running for the Texas Co. at Tomball, and a second rig is on a workover job for the Texas Co. at Conroe, Tex.

FRANK M. LONG

Frank M. Long, amiable and able member of the Gulf Coast well drilling fraternity, landed his first roughnecking job with the firm of Blaffer & Farish, well drilling contractors, in the Humble Field in 1910. For seven years he pursued his fortune as a field man in the Gulf Coast of Texas and Louisiana, becoming a driller in 1915. In 1917 he assembled drilling equipment of his own, and entered the contracting business, drilling his first contract well for the Crown Central Oil Co. He then moved his equipment to Damon Mound, where he drilled a number of wells for the Humble Oil & Refining Co., following which he moved his rigs into the Balcones fault district of Southwest Texas, drilling a number of wells in the Darst Creek and Salt Flat Fields where, at one time, he had five rigs running. Since then Frank has, according to his own expression, been drilling "catch-as-catch-can." all over the Gulf Coast, including the East Texas and Conroe fields where his three rigs were kept constantly busy. At one time Sam Raborn was associated with Mr. Long. On Mr. Raborn's death in 1931, Mr. Long purchased his partner's interests and has been operating individually. Mr. Long at present has a rig running for Albert Plummer in East Texas, one for Jack Clark in the Manvel area, and is rigging up in Calhoun County to drill a well for Mills Bennett.

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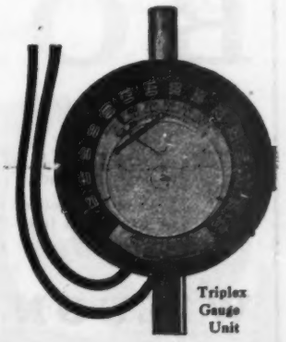

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New Area in Galveston County May Have Oil; Blowout Is Extinguished by Well Sanding Up

By A. C. EASTERWOOD
Gulf Coast Bureau, The Oil and Gas Journal

HOUSTON, Tex., Aug. 6.—Interest on the Gulf Coast at the end of the week was centered near Dickenson in Galveston County and on Humble Oil & Refining Co.'s No. 1 Maco Stewart which blew out after encountering a high gas pressure. Only a few minutes after the blowout the well took fire, destroying the derrick and most of the rig equipment. It blew out at 5:30 Saturday morning and within less than three hours, around 8:30, the well sanded up, extinguishing the flames. Before the fire was extinguished the flames were reported getting darker, indicating some oil with the gas.

This important discovery topped the gas sand at 7,889 feet and is reported to have reached a total depth of 7,916 feet at the time of the blowout. Efforts to shut in the well with the blowout preventer failed. It has more than 5,800 feet of open hole, the last string of casing set, being 13⅜-inch at 2,070 feet.

The well proves the existence of a new gas producing area and it is the general opinion that if the well is carried deeper it will uncover the oil bearing sand. It is now in the Frio which was topped at 7,712 feet. It had a show of gas with a reported odor of oil from 7,780-7,809 feet and also reported odors of oil to the top of the gas sand at 7,889 feet. It topped the Miocene Discorbis 6,465 feet, had top of Oligocene Discorbis 6,532 feet, top of Heterostegina 6,786 feet and topped Marginulina 7,009 feet. Surface elevation is 20 feet.

The area has been worked extensively with geophysical instruments. Humble has shot the area with both torsion balance and reflection seismograph. Texas Co. and Rosaire also worked the prospect.

The well is east of Dickinson and in the center of the east and west lines of the 400-acre tract in the John Sellers survey. At last report operators were clearing up the debris and plan to rebuild derrick and resume operations as soon as possible.

The nearest well, Spoor's No. 1 Maco Stewart, about 3 miles south, has been temporarily abandoned at 6,577 feet.

Galveston County has had its share of geophysical exploration during recent months. At the present time four companies have crews working in the county. Humble Oil & Refining Co. has a reflection crew between Alvin and Dickinson, Amerada has a reflection crew in the Friendswood area, Texas Co. a reflection crew south of Hitchcock and in the southern part of the county, and Stanolind has a three-instrument crew in the northern part of the county and around the M. Muldoon Survey.

Boling Well

Allied Minerals Inc.'s No. 1 J. B. Farmer, on the southeast flanks of the old Boling Dome in Fort Bend County, which came in last week from the Frio for a good producer, is still flowing around 660 bbls. daily on three-eighth-inch choke and showing a pressure of 350 pounds on tubing and 1,075 pounds on casing. It topped the Frio at 4,399 feet and had solid sand at 4,413 feet, sandy shale, 50 per cent of which was sand from 4,413-18 feet, and sand from 4,418-28 feet, the present total depth. It topped the Oligocene at 4,090 feet, and had top of Discorbis Vilardeboana at 4,150 feet. About a half mile to the west of the new discovery, Trans-State Oil Co. is preparing to spud No. 1 Joseph Fotjek, in the northeast corner of a 68.29-acre tract. It is a little higher on the dome than the new producer.

Gem Oil Co.'s No. 1 Farmer, in the Robert Hodges Survey and on a 3,000-acre block near Needsville, has been abandoned with total depth of 6,008 feet. It topped Discorbis at 4,643 feet and had top of Heterostegina 4,977 feet.

At Splendora

At Splendora in Montgomery County, Humble Oil & Refining Co.'s No. 1 Anna M. Platte, east of the discovery well and in the Wm. Barker Survey, was coring shale 6,090 feet. On a drill stem test from 5,826-61 feet the tool slipped and in 4½ minutes it recovered 310 feet of mud carrying a salty taste. Test was made with one-quarter-inch choke on top and three-eighth-inch choke on bottom. Another drill stem test from 5,837-61 feet was also a failure. It topped the Fayette 4,690 feet, had Hockley 4,940 feet and encountered top of Cockfield 5,785 feet, which is lower than the discovery. Steen's discovery well at last report was making around 2 bbls. of salt water daily with 11 bbls. of distillate through one-fourth-inch choke and showing 1,025 pounds pressure on tubing and 1,175 pounds on casing.

West of Conroe

West of the town of Conroe and in the Mary Corner Survey, Shell Petroleum Corp.'s No. 1 Crighton was drilling shale and lime at 2,227 feet. The 13⅜-inch casing was cemented at 1,114 feet. Sayre Oil Co.'s No. 1 Delta Land Lumber Co., in the J. Truitt Survey, north of Willis, was shut down at 3,350 feet, clearing titles. It topped the Hockley at 2,740 feet actual or minus 2,461 feet.

Harris County

Just west of Houston city limits in Harris County, Loring Oil Co.'s No. 1 Westmoreland was drilling at 6,730 feet and at that depth the Jackson had not been encountered. It topped Discorbis at 4,166 feet and had top of Heterostegina at 4,286 feet. Surface elevation is 84 feet. In west central Harris County and in the John C. Ogburn Survey, General Crude Oil Co.'s No. 1 Rorick estate was drilling sandy shale at 4,700 feet. It topped the Discorbis at 2,950 feet and had Heterostegina at 3,003 feet. Elevation is 147 feet. Southland Oil Co.'s No. 1 Galney, about 3 miles northeast of Houston and in the T. C. Frick Survey, was drilling at 4,735 feet. Texas-New York Development Co.'s No. 1 Raison, in the J. W. Moody Survey, about 9 miles northeast of Houston, was waiting on cement at 1,538 feet.

At Goose Creek in Harris County, Humble Oil & Refining Co.'s No. 80 Simms Smith, deep test for the area, was drilling at 4,078 feet in shale.

Allen Parish

In Allen Parish, Humble Oil & Refining Co. is building derrick for No. 1 Industrial Lumber Co., a Conroe trend test about 13½ miles northeast of its recent abandonment in the Dry Creek area of Beauregard Parish. The well is 1,220 feet from the west line and 2,440 feet from the south line of Section 21-3s-5w, and on its selection of 9,600 acres out of the 38,000-acre option. It is about 6 miles southwest of Elizabeth.

Bosco Field

In the Bosco Field of Acadia and St. Landry Parishes, Superior Oil Production Co.'s No. 1 Sidney Arceneaux and others, about three-quarters of a mile northwest of the discovery, was drilling at 8,578 feet and looking very unfavorable for a producer. At this depth it is 728 feet below the producing depth of the discovery well, No. 1 Hermandes, which is producing from 7,845-50 feet. Superior's No. 1 Leo Kahn and others, about a mile southwest of the discovery producer, was drilling at 7,669 feet and reported running about 300 feet low. No. 1 Marcellus Savoie, about a mile to the northeast of the discovery, was drilling at 8,420 feet in sand and shale. It had salt water sand from 8,203-15 feet. No. 1 Looanstie Richard about three-quarters of a mile southeast of the discovery, was drilling at 8,280 feet in shale and broken lime. Superior has 10 other wells in the area that are either preparing to start up or drilling at unimportant depths. At present the field has three producers, No. 1 Hermandes, the discovery well, producing from perforations at 7,845-50 feet; No. 1 Iseringhausen, east of the discovery, producing from total depth of 7,853 feet, and No. 1 Mire, west of the discovery, producing with total depth of 8,088 feet, or 238 feet deeper than the discovery producer.

About 12 miles northwest of the Bosco Field, Edwards Drilling Co.'s No. 1 Daigle, in Section 24-7s-1e, was coring shale at 7,244 feet.

Beauregard Parish

About 10 miles east of De Quincy, in Beauregard Parish, Federal Petroleum Co.'s No. 1 Lutcher-Moore Lumber Co., was preparing to abandon with total depth of around 8,700 feet. Three companies have geophysical crews working in this parish. Ohio Oil Co. has a torsion balance crew working around Townships 3-11w and 4-11w. Amerada Petroleum Corp. has a reflection crew, north of Pujo and in the north central part of Township 3s-10w. Texas Co. has a reflection crew northwest of the dry Creek area and in Township 3s-8w.

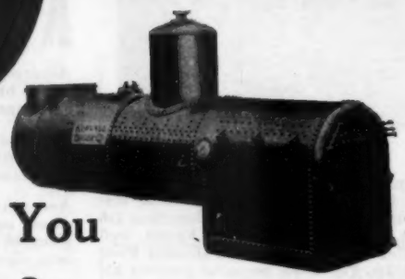
Liberty County

In Liberty County, Magnolia Petroleum Co.'s No. 1 Maco Stewart, in the A. Cherry Survey, about 2 miles north of Rayburn, was rigging up and preparing to spud. In the Cleveland area, Gulf Production Co.'s No. 5-C Kirby, in the J. Pleasant Survey, was waiting on cement with total depth of 1,061 feet in gumbo.

Austin County

About 3 miles east of the New Elm area in Austin County, Indian Territory Illuminating Oil Co. and Johnson Broth-

KEWANEE



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ers' No. 1 August Wrangler, in the Adam Kuykendall Survey, was drilling below 700 feet in shale. At Raccoon Bend, Humble Oil & Refining Co.'s No. 3 McCasland, in the W. C. White Survey, has been completed for 34½ bbls. per hour through three-eighths inch choke at 4,130 feet. The well was formerly carried to 4,181 feet and then plugged back to 4,130 feet. It showed 680 pounds pressure on tubing and 610 pounds pressure on casing. Humble's No. 6 M. R. Sherrod was shut down waiting on cement to set at 4,151 feet. It had sand with a show of oil from 3,138-47 feet, sand showing oil 3,147-56 feet, and sandy shale showing oil 3,409-18 feet. Humble's No. 7 Joe Gutowsky was drilling shale at 4,488 feet. Same operator's No. 14 Roy Thompson was drilling shale at 3,284 feet.

Grimes County

In Grimes County, J. H. Woodard and others' No. 1 O. A. Hamilton, south of Richards and in the O. Hill Survey, was coring at 3,290 feet and reported running high. It topped Fayette at 1,620 feet, had Hockley at 2,585 feet and topped Cockfield at 3,082 feet. Surface elevation is 347 feet.

Brazoria County

At Manvel in Brazoria County, Windsor Oil Co.'s No. 1 Colby, southwest of production, has been completed for 30 bbls. per hour through one-fourth-inch choke with total depth of 5,120 feet. It topped the sand at 5,077 feet. West of production, Texas Co.'s No. 2 Ellis, in the H. N. Little Survey, was shut down 5,257 feet. In the southeastern part of the field, Texas Co. has staked location for No. 1 Rash, 330 feet south 42 degrees west and 330 feet south 48 degrees east from the north corner of lease in the Thos. Spraggins Survey. Gulf Production Co. has completed derrick for No. 2 Colby 991 feet southeast and 330 feet northeast of the west corner of the Colby lease in Lot No. 21, Thomas Spraggins Survey.

At West Columbia in Brazoria County, Mirimar Oil Corp.'s No. 3 Hogg was drilling sand and shale 5,394 feet.

Van Vleck

At Van Vleck in Matogarda County, Skelly Oil Co. was digging cellar for No. 2 F. G. Cobb, 1,600 feet northwest of No. 1 discovery well and 1,185 feet from the west line and 2,515 feet from the south line of the F. G. Cobb lease in the Marie Cummings Survey. Four companies have geophysical crews working this county. Sun Oil Co. has a reflection crew in the southeast part of the county and in William Baxter Survey. Continental Oil Co. has a reflection crew on the east side of Lake Austin. Hammond has a reflection crew northwest of Hawkinsville. Texas Co. has a two-instrument torsion balance crew working south of Markham.

Hardin County

In Hardin County, Wilcox Oil & Gas Co.'s No. 1 Sternberger, in the C. Dorsey Survey No. 1, was shut down at 6,000 feet. It topped the Hockley 5,562 feet and had top of Discorbis 5,807 feet. Elevation is 81 feet.

At Sour Lake in Hardin County, Apha Petroleum Co.'s No. 1 J. M. Weiss, in the H. Williams Survey, was making approximately 100 per cent salt water with only a slight trace of oil. At last report it was preparing to re-run packer. Total depth of the hole is 7,012 feet.

Chambers County

In Chambers County, Turnbull & Irwin's No. 1 Sudindorf, due east of Analuac in the H&TC Survey, Section 67, was drilling sandy shale 6,370 feet.

Jefferson County

In Jefferson County, Sun Oil Co.'s No. 1 Long, in the John Blair Survey, was drilling 8,088 feet in shale. Turnbull & Irwin's No. 1 Toliver, in the Shadric Morris Survey, was drilling 2,400 feet.

Houston County

About 6 miles east of Weldon and in the C. McEllis Survey, Houston County, Boone Bros.' No. 1 Trinity State Bank, had sand lenses and shale from 1,404-35 feet with a scum of oil. A drill stem test failed. The tool was open 4 minutes and gave way. At last report it was drilling.

Trinity County

In Trinity County and approximately 6 miles west of Apple Springs, M. E. Tanner is reported to have leased around 5,500 acres centering around the J. H. Cunningham Survey, Abstract 144. It is rumored this is going to Humble Oil & Refining Co.

Jackson County

At Vanderbilt in Jackson County, Phillips Petroleum Co.'s No. 1 J. H. Drummond, on a drill stem test from 5,666-75 feet showed 220 pounds dry gas in 10 minutes. At last report it was coring ahead 5,675 feet. It had salt water sand 5,277-5,373 feet. No. 1 Siedel & Simmons, in the Raymond Musquiz Survey, was coring 6,009 feet. It cored salt water sand from 5,659-61 feet. No. 1 State Realty was waiting on cement after setting surface casing at 1,151 feet.

Refugio County

In the Bonnie View area of Refugio County, Heard-Holland Oil Co.'s No. 1 Peck, was preparing to drill plugs. The 7⅝-inch casing was cemented at 5,348 feet. Quintana's No. 1-B O'Connor, about 4 miles southeast of Refugio and

(Continued on Page 63)

Wildcat Operations on Gulf Coast

Week Ending August 4

RACCOON BEND—AUSTIN COUNTY

Humble O. & R. Co.'s No. 7-X Gutowsky, 466 ft. N and E lines of 150-ac. tract in W. C. White Sur.
Drlg. shale 4,488 ft.

Humble O. & R. Co.'s No. 3 McCasland
T.D. 4,181 ft.; P.B. 4,130 ft.; comp. 34½ bbls. hour, ⅜-in. choke, T.P. 680 lbs., C.P. 610 l. s.

Humble O. & R. Co.'s No. 6 M. R. Sherrod, 933 ft. E of W line, 466 ft. N of S line of W. C. White Sur.
T.D. 4,151 ft.; W.O.C.

Humble O. & R. Co.'s No. 14 Roy Thompson, 466 ft. S of N line, 933 ft. E of W line of 253-ac. tract in W. C. White Sur.
Drlg. shale 3,284 ft.

DANBURY—BRAZORIA COUNTY

Shell Pet. Corp.'s No. 4 Blakely & Winston.
T.D. 2,270 ft.; W.O.C.

Shell Pet. Corp.'s No. 3 Haury, 800 ft. SE of No. 2 in line with No. 2 and No. 1 Blakely-Winston, H&T B. Sur. No. 12.
Drlg. hard shale and sand 5,121 ft.

Shell Pet. Corp.'s No. 1-A Schmidt, 357 ft. E and 107 ft. from NW cor. of 146-ac. tract in J. H. Bruner Sur.
Coring sticky shale 1,361 ft.

DAMON MOUND—BRAZORIA COUNTY

Esco's No. 1-D Wisdom, 25 ft. from S and W lines of Blk. 19, Lot 5, A. Darst Sur.
lime and shale 1,165 ft.; S.D.

H. Wisdom's No. 1 Proctor, 40 ft. out of SW cor., Blk. 1, A. Darst Sur.
T.D. 1,417 ft.; S.D.

MANVEL—BRAZORIA COUNTY

Gulf Prod. Co.'s No. 2 Colby, 991 ft. SE and 330 ft. NE of W cor. of Colby lease, Lot 21, T. Sproggins Sur.
Derrick.

Harrison & Abercrombie's No. 1 Bernard River Land, 1,000 ft. out of SE cor. of Lot 23.
Spud.

Mae O. Milner's No. 1 H. F. Stipp, 220 ft. W of E line and 195 ft. N of S line of Lot 28, H.&T.B. No. 23 Sur.
Location.

Texas Co.'s No. 11-B Belcher, 460 ft. S, 48 deg. 9 ft. E of B-10 and 330 ft. N, 41 deg. 51 ft. E of SW line of lease, H. N. Little Sur.
T.D. 5,120 ft.; running screen.

Texas Co.'s No. 12-B Belcher, 154 ft. and 42 degrees 330 ft. N 48 degrees W from NE cor. of Helen J. Way lease in H. N. Little Sur.
Derrick.

Texas Co.'s No. 2 Bott, 200 ft. N and 24 ft. W of S line and 330 ft. S 41 deg. 51 ft. E from NE line of Lot No. 7 in Charles O'Donnell Sur.
T.D. 5,168 ft.; W.O.C.

Texas Co.'s No. 2 Ellis, 330 ft. S, 82 deg. 48 ft. W from E line, 330 ft. N 48 deg. 20 ft. W of SE line of lease in H. N. Little Sur.
T.D. 5,257 ft.; S.D.

(Continued on Page 73)

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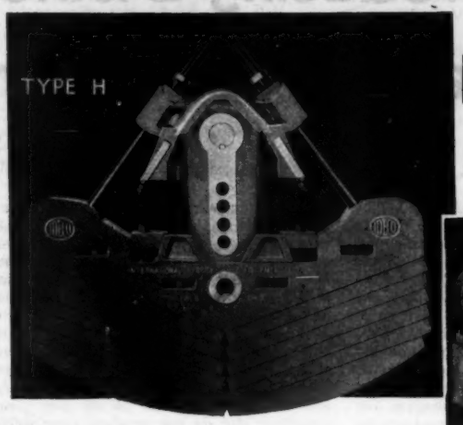

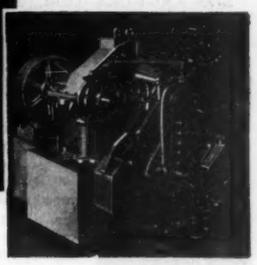

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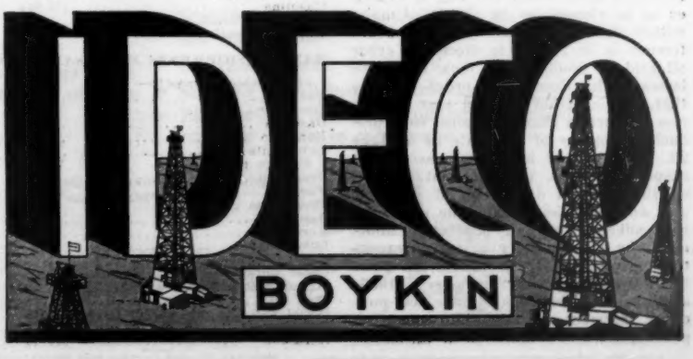

Three Producing Districts Established to Aid the Crude Oil Curtailment Program in California

By L. P. STOCKMAN
Staff Correspondent, California Fields

LOS ANGELES, Calif., Aug. 6.—The Petroleum Administrator has officially approved the proposal to divide the State of California into three divisions for the purpose of simplifying crude oil curtailment and to provide a means of determining the normal demand for the different grades of crude oil. The state under this ruling is divided into the San Joaquin Division, the Coastal Division and Los Angeles Basin Division. The plan to subdivide the state into three divisions was recorded in The Oil and Gas Journal several weeks ago at which time it was under consideration. Secretary Ickes' order provides that, "in order to effectuate the purpose of this order of providing equitable access to accustomed sources of crude petroleum for the various refiners supplied from different producing districts within the state, the San Joaquin Valley, the Coastal counties and the Los Angeles Basin are hereby recognized as three geographically separate and distinct producing districts, and the certified quota for the state shall be subdivided among these districts so as to balance production with the established consumptive demand for petroleum and its products from said districts as determined from the statistical records of the U. S. Bureau of Mines.

"In order to effectuate the purpose of this order of allocating equitably the district quotas as hereinbefore determined among the pools and fields of each district, each distinct quota shall be distributed to the pools within that district by appropriate monthly adjustments of the base quota of each pool determined as of May 1, 1934, by a strictly uniform method of allocation whereby each well of the state received a minimum allotment as hereinafter prescribed plus a remaining allotment determined by the application of the necessary factor of graduation to the remaining potential of all wells as of that date. Such monthly adjustments of pool quotas shall include an adequate reduction in quota to reflect the proportionate shrinkage in the status of each pool as a source of supply and the quota lost by reason of the depletion incurred from the production of the previous month."

Excess Production

There seems to be a little misunderstanding regarding the interpretation of certain portions of the Petroleum Administrator's latest order but this is expected to be cleared up by the Oil Umpire within the near future. The chief difference is in regard to stocks of crude oil held by producers on their respective leases. The Secretary's order provides that, "It is hereby ordered that the excess production charged against each producing property of the state as of June 23, 1934, be and is hereby placed in a suspense account, pending final decision on the eventual disposition of such excess and conditional upon the strict future adherence to all production allotments by each property having an excess thus suspended. Furthermore, all crude in lease storage as of September 8, 1933, shall be considered as eligible for purchase, shipment and entry into commerce pending final determination of its status by the Petroleum Administrator." Umpire Pemberton's General Order No. 8 provides that, "The result of this order to the purchasing companies is that you are permitted to ship your July allowable production. In addition to this you are allowed to ship any stored oil in your tanks as of July 1, 1934. In the event you wish to ship all or part of your stored oil, thereby reducing your storage below the amount held as of July 1 you will be allowed to do so at any time providing you do not produce your wells in excess of your allowable production. It will be noted that the Petroleum Administrator places all excess production in a suspense account and releases for shipment lease stocks as of September 8, 1933, whereas the Oil Umpire's order appears to void this provision by informing operators that they can ship any oil which was in their tanks on July 1, 1934.

August Quotas

Reduction of California's daily quota from 509,400 bbls. which prevailed in July to 490,200 bbls. for the month of August has resulted in a cut of 9,820 bbls. in the allowable daily quota of Los Angeles Basin fields, 9,300 bbls. per day in San Joaquin Basin fields and a reduction of 80 bbls. per day in the allowable of the Coastal fields.

Protest Quota

The Union Oil Co. has joined the numerous protestants of the so-called uniform method of allocation which was placed in effect in June, and the placing of all past excess production in a suspense account has not met with universal approval especially by operators who have endeavored to abide by curtailment regulations to the very letter. The Union's statement was to the effect that, "after loyally supporting curtailment efforts since they were first started some five years ago, certain companies have been penalized because now their sparsely drilled acreage, as for instance the Union Oil Co.'s acreage at Santa Fe Springs which has been retarded in the interests of conservation, is being drained by operators who have already produced more than 17 times 100 per cent of the cubical content of the oil zones underlying their properties. Yet these wells, which are still producing, under the new allocation method receive a relatively higher allowable, based on potentials hiked up by drainage of Union's undrilled acreage, than the Union's own producing wells receive."

A. C. Rubel, who presented the vigorous protest of the Union Oil Co., supported his contentions with graphs, charts and maps and the Central Committee recommended submission of the data in written form to the grievances committee. Many California operators are firmly convinced that no definite rule can be laid down which will give every field a fair break due to peculiar characteristics of each area. Recently operators in the Kettleman North Dome Field received special consideration after a general hearing that extended over several weeks. The principal contention revolves around whether the allowable of a field should be determined on potential production, as represented by the ability of a field to produce under normal conditions, or whether other contributory factors, depth and acreage, should enter into final calculations.

The situation has been further complicated by a recent order of the Petroleum Administrator that all excess production registered prior to June 3, 1934, should be placed in a suspense account. Obviously this order was to the disadvantage of operators who have strictly conformed with curtailment in the past. The order in question is to the effect that, "It being apparent that serious disruption of the established and expected flow of oil in commerce and adverse effects on the Pacific Coast Petroleum Agency and Refiners' Agreements might result if the absorption of all past overproduction were required during July, it is hereby ordered that all past overproduction in California since September 8, 1933, be placed in a suspense account as of June 3, 1934, the effective date of the said agreements, conditioned upon strict future compliance to all orders issued pursuant to the Code of Fair Competition for the Petroleum Industry." The significance of this order and the protestation of the Union Oil Co. is quite obvious in view of the fact that state production of crude oil during the month of July has been considerably in excess of the prescribed allowable of 509,400 bbls. per day. The primary objective of creating a suspense account was to facilitate operation of the marketing agreement and secondarily to offer an inducement to producers to conform with curtailment regulations. If this order has failed to effect compliance with the secondary purpose it might just as well be thrown in the scrap heap because operators who have followed curtailment right along are still at the head of the list while the irreconcilables appear to be up to their regular tactics of chiseling wherever possible. Some good has been accomplished, however, as a large part of the chronic overproduction has been eliminated. This is due primarily to the policy of refiners, in conformity with the marketing agreement, of refusing to purchase any oil produced in excess of the allowable.

Seek Heavy Grade Oil

California marketers are getting ready in anticipation of a brisk fuel oil market during the forthcoming winter season and are accordingly stepping up drilling operations in fields that yield a heavy grade of crude oil. This increased drilling has become especially pronounced in the Mt. Poso and Edison Fields of Kern County and from present indications we may anticipate additional work during the next several months. The Edison area is rapidly becoming one of the most active districts in the state and before long, at the present rate of work, will rank right up near the top of the list. The Shell, which pioneered development work in this district without much success, is back in the area again with two drilling wells to its credit on the Cauley and Duff leases. The A. T. Jergins Trust, with two drilling wells to its credit, and the Monterey Exploration Co., with one producing well and one drilling well on its list, have staked 12 new locations for immediate work. These locations are No. 1 Grayson, No. 1 Cowan, No. 1 Hershey, No. 1 Citizens, No. 1 Osborne, No. 1 W. H. Andrews, No. 1 R. B. Andrews, No. 1 Johnson, No. 1 Wildman, No. 1 Ross, No. 1 McCowan and No. 1 Smithwick.

The Barnsdall Oil Co., which has acquired some good looking acreage in the Edison district, spudded in its first project on the Slininger lease during the early part of the current week. The pay is found in this field at a relatively shallow depth and consequently drilling costs are rather low and the drilling time from spud to completion only a matter of a few weeks. These wells encounter the pay all the way from 2,000 feet to 3,200 feet depending upon their location with respect to the accumulation. The Gilco Oil Co. is rigging up a compressor preparatory to recompleting No. 1 Stuart-Gerard which has been finished at 2,168 feet after the hole had been plugged back from 2,347 feet because of a water sand. The company is building rig for No. 2 Stuart-Gerard and has material on ground

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	July 22		July 15			
Intercoastal-domestic—	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Fuel oil	226,124	32,303	220,824	31,546	8,614,310	805,661
Diesel and gas oil	.....	.....	.....	.....	1,000,056	1,085,064
Gasoline	272,935	38,991	76,084	10,869	4,026,389	5,329,666
Kerosene	68,659	9,808	.....	.....	648,080	502,970
Asphalt	.....	.....	.....	.....	70,019	12,179
Other finished oil	29,019	4,146	.....	.....	54,778	62,210
Other unfinished oil	.....	.....	.....	.....	.....	72,554
Foreign exports—						
Crude oil	305,864	43,695	72,630	10,376	4,170,545	4,121,605
Fuel oil	244,521	34,917	256,832	36,690	7,085,946	4,383,394
Diesel and gas oil	313,696	44,814	29,683	4,240	2,538,893	2,112,262
Gasoline	188,284	26,898	.....	.....	2,339,801	3,443,474
Kerosene	78,819	11,260	.....	.....	1,140,211	1,020,864
Other finished oil	.....	.....	.....	.....	3,529	12,086
Other unfinished oil	.....	.....	.....	.....	186,069	34,547
Coastwise-domestic—						
Crude oil	150,714	21,531	35,057	5,008	4,926,427	4,600,055
Fuel oil	89,298	12,757	99,424	14,205	4,954,270	5,757,866
Diesel and gas oil	1,471	210	2,130	304	390,822	772,590
Gasoline	335,804	47,972	414,165	59,166	6,401,688	7,084,135
Kerosene	.....	.....	5,761	823	87,233	115,248
Naphtha distillates	.....	.....	.....	.....	.....	27,651

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Fuel oil	.....	.....	.....	.....	110,650	.....
Diesel and gas oil	.....	.....	.....	.....	448,113	280,531
Gasoline	.....	.....	.....	.....	145,806	571,072
Kerosene	.....	.....	.....	.....	276,412	482,430
Lubricants	.....	.....	.....	.....	26,500	24,366
Foreign exports—						
Crude oil	.....	.....	.....	.....	1,005,072	1,147,293
Fuel oil	72,731	10,389	20,374	2,911	1,067,342	361,366
Diesel and gas oil	.....	.....	.....	.....	818,270	626,662
Gasoline	.....	.....	14,830	2,119	1,879,042	2,600,540
Kerosene	.....	.....	.....	.....	510,089	563,480
Lubricants	.....	.....	.....	.....	89,744	76,905
Other finished oil	.....	.....	.....	.....	2,760	2,745
Other unfinished oil	.....	.....	.....	.....	5,750	19,166
Coastwise-domestic—						
Fuel oil	146,316	20,902	449,627	64,261	2,916,684	1,916,524
Diesel and gas oil	12,914	1,845	.....	.....	109,129	166,162
Gasoline	184,554	26,336	198,503	28,358	2,362,524	2,114,585
Kerosene	.....	.....	.....	.....	57,464	73,619

for No. 3. The Mohawk, Ohio and Mitchell-McMillan Co. are also preparing to undertake immediate work.

Mount Poso

The Union and Shell are stepping right along with their drilling programs in the Mount Poso Field and both should begin drilling operations on additional wells within the next 10 days. The Union is building new rigs for five wells to be drilled on the S. & M. property which the company owns in fee and one of these, No. 15, should be making hole within the next few days. The Shell, which is rotating ahead in two new wells in the Mount Poso Field, is making preparations to start work on six additional projects within the near future. The Shell has considerable undeveloped acreage in this field and will, in all probability due to the increasing demand for fuel oil, adopt an aggressive development program during the remainder of the present year. The Shell's new locations are on the Mathews, Security, Vedder and Vedder-Rall leases. The Pongratz Oil Co. finished an excellent new well in this field during the current week when No. 3 Tavis in Section 10-27-28 was brought in on the beam pumping 1,105 bbls. of exceptionally clean 16.5 gravity oil per day from 1,835 feet. The top of the lower Vedder zone was logged at 1,703 feet and with 182 feet of formation open for production it is quite obvious that this well should show a long life.

The Pacific Western Oil Co. filed suit in the Superior Court at Bakersfield a few days ago against the Bern Oil Co. and petitions the court for an award of $75,000 damages and an injunction to prevent the latter company from operating its three wells on the Glide lease in the Mount Poso Field. Abe and Sam Bernstein and Bert Brunwin are named as defendants in the action which alleges that the defendants by whipstocking operations have bottomed their wells beneath the plaintiff's property. This is the first suit of its kind filed in Kern County, although the three defendants were indicted by the Kern County Grand Jury several months ago on the identical charge. When tried, however, the case was decided in favor of the defendants for the simple reason that Kern County officials could not show the court that the political subdivision had suffered any material damages as a result of the alleged unethical practice. Kern County officials were attempting to establish a precedent in order to stop crooked hole drilling which threatened to become somewhat of a racket.

In the Round Mountain Field of Kern County, the Shell successfully recompleted well No. 3 on Jewett lease No. 3 pumping 610 bbls. of 16.1 gravity oil per day after plugging back the hole from 2,128 feet to 2,085 feet.

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Clayton, K. L., No. 1 Cerritos, Los Angeles Co.	31- 3-12	6,604	suspended
Woodward Oil Co., No. 1 Athens, Los Angeles Co.	12- 3-14	4,790	sd. sh. drilling
Sherman, John, No. 1 Athens, Los Angeles Co.	2- 3-14	....	loca.ion
Houser, G. W., No. 1 Athens, Los Angeles Co.	18- 3-13	4,037	clean.ng out
Cypress Pet., No. 1 Athens, Los Angeles Co.	20- 3-13	6,072	110 B/D
Quinn, J. B., No. 1 Domingues, Los Angeles Co.	3- 4-13	4,587	plug 4,500
Wehrman, J. K., No. 1 San Pedro, Los Angeles Co.	14- 5-14	1,653	suspended
Nudson, T. T., No. 1 Inglewood, Los Angeles Co.	17- 2-14	3,020	P. 2,370; idle
Norton Oil Co., No. 1 Inglewood, Los Angeles Co.	7- 2-14	6,508	plug 6,060
Scientia Oil Co., No. 1 Inglewood, Los Angeles Co.	7- 2-14	3,806	recemented
Pacific Western, No. 1 Inglewood Deep, Los Angeles Co.	8- 2-14	4,945	hd. sh. drilling
Plymouth Oil Co., No. 1 Inglewood, Los Angeles Co.	8- 2-14	5,602	plug 4,450
Wilshire Oil Co., No. 2 Potrero Deep, Los Angeles Co.	27- 2-14	7,780	sd. sh. drilling
Community Oil Co., No. 1 Montebello, Los Angeles Co.	34- 1-11	7,447	suspended
Universal Consd., No. 1 Montebello Deep, Los Angeles Co.	5- 2-11	7,505	150 B/D
Universal Consd., No. 2 Monte ello Deep, Los Angeles Co.	5- 2-11	6,950	suspended
Universal Consd., No. 3 Montebello Deep, Los Angeles Co.	5- 2-11	7,680	suspended
Texas Co., No. 1 Montebello Deep, Los Angeles Co.	6- 2-11	6,943	recemented
Standard Oil Co., No. 1 Mon.ebello Deep, Los Angeles Co.	6- 2-11	6,829	sd. sh. drilling
St. Helens, No. 1 Montebello Deep, Los Angeles Co.	6- 2-11	5,584	sd. sh. drilling
Fullerton Oil Co., No. 1 Montebello Deep, Los Angeles Co.	6- 2-11	5,471	hd. sh. drilling
Pressen & Tull, No. 1 Puente Hills, Los Angeles Co.	30- 2-9	3,195	br. sh. drilling
Barstow Oil Co., No. 1 Saugus, Los Angeles Co.	35- 5-16	2,136	suspended
Barstow Oil Co., No. 2 Saugus, Los Angeles Co.	35- 5-16	522	cemented
International Dev. Co., No. 1 Saugus, Los Angeles Co.	34- 5-16	2,474	hd. sd. drilling
Black Eagle Oil Co., No. 1 Huntington, Orange Co.	tideland	3,985	suspended
Nuoil Co., No. 1 Newport, Orange Co.	29- 6-10	6,455	clean.ng out
Bradford, W. G., No. 1 Newport, Orange Co.	19- 6-10	....	foundation
Piatt & Collins, No. 1 Costa Mesa, Orange Co.	14- 6-10	1,596	hd. sh. drilling
Mid-Rich Drlg. Co., No. 1 Atwood, Orange Co.	26- 3-9	2,602	sd. sh. drilling
Union Oil Co., No. 1 Coyote, Orange Co.	22- 3-10	5,293	sd. sh. drilling
Bridger, J., No. 1 Coyote, Orange Co.	15- 3-10	4,212	sd. sh. drilling
Severns Drlg. Co., No. 3 Wes. Coyote, Orange Co.	24- 3-11	4,760	sd. sh. drilling
Rubens, Si., No. 2 East Coyote, Orange Co.	19- 3-9	mtl.	build.ng rig
Great American Pet., No. 1 Chino, San Bernardino Co.	18- 2-8	2,642	suspended
Great American Pet., No. 2 Chino, San Bernardino Co.	18- 2-8	3,100	sidetrack D/P
Great American Pet., No. 3 Chino, San Bernardino Co.	7- 2-8	mtl.	building rig
Tehama Pet., No. 1 Santa Ana Canyon, S. Bernardino Co.	33- 2-8	2,226	suspended
San Diego Pet. Co., No. 1 Chula Vista, San Diego Co.	32-18-2	4,055	gas showing

Midway-Sunset

The Standard Oil Co. recently quitclaimed the Mascot lease in the Midway-Sunset Field which was acquired several years ago when it looked for a time that there was an excellent possibility of developing deep commercial production. The Standard drilled a deep test on the property in question but failed to get commercial production and subsequently abandoned the project after testing out by stages. This well showed up rather good during the course of drilling but the company suspended operations before testing out the showing and upon the resumption of work was unable to find the showing logged. Many operators are of the opinion that the heavy mud adequately mudded off the possibly productive zone as the well stood suspended for a period of 18 months.

Due to a crooked hole, the Standard Oil Co. has been delayed in its McKittrick wildcat while the crew removes the kinks at 3,653 feet. This well, drilled in the center of a full section showed sufficient gas to justify the expectation of resulting in a commercial gas well but the company decided to drill ahead in order to ascertain whether or not any additional gas zones might be found and at the same time determine oil possibilities. The Union Oil Co. recently acquired 340 acres from the McKittrick Oil Co. in the McKittrick Field for a consideration of $100,000 and while no immediate work is contemplated the acreage will be given a deep test some time within the next few years. Neither the Union nor McKittrick Oil Co. is in a hurry to conduct deep drilling as they recognize the fact that the price of crude oil should show a substantial increase within a year or so. The Midway Peak Oil Co. is rotating ahead in its well No. 1 in Section 3-32-22 at 1,248 feet with good showings of oil and gas on the ditch. This well may bear watching because if the company finds an anticline beneath the outcrop the property may show substantial production.

Mountain View

The Union Oil Co. has successfully completed its No. 1 Wible in the Mountain View Field of Kern County, but the initial daily production, 145 bbls. from 5,556 feet, is not as large as anticipated in as much as the well showed plenty of kick during the course of work. It may be possible that the well will show larger production after it has been on production a little longer as was the case with No. 1 Kernco which was brought in on the beam and then recompleted as a flowing well after it had produced on the pump for approximately two weeks.

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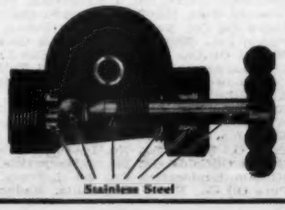

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The Sovereign Oil Co.'s No. 2 S. J. Development came in wet on a production test at 5,995 feet but the company will permit the well to flow as water was found in the producing formation. This well was finished with an 8⅝-inch water string landed at 5,703 feet and a 6⅝-inch liner including 319 feet of perforated. Drilling operations in the Mountain View Field appear to be slowing up somewhat but operators may take on a new lease on life in the near future. The abnormally low allowable daily production given the field by the Central Committee of Oil Producers has retarded drilling operations.

Huntington Beach

Injunction suits filed against E. K. Allison Syndicate and 20 other operators in the Huntington Beach Field several months ago have been dismissed at the request of F. P. Doherty, special assistant to the Attorney General. The application for a restraining injuction against these operators was filed last winter when investigators charged the companies with producing crude oil in excess of the quota established by the Oil Umpire as representative of the Petroleum Administrtor. The dismissal of this action is the result of an agreement that operators will abide by curtailment and conform with the regulations prescribed by proper authorities. Similar action against the Wilshire Oil Co. and its subsidiaries is pending in the Datrict Court of Federal Judge Paul McCormick and it is quite possible that this action will also be dismissed if the defendants agree to conform with curtailment requirements.

The Texas Co. successfully completed No. 5 Robinson, a new well, in the Long Beach Field during the early part of the current week and it was brought in doing 540 bbls. of relatively clean 26.1 gravity oil per day. This well did not have sufficient gas pressure to result in a natural flow and it was put on a compressor from 4,171 feet after the hole had been completed with a 5-inch liner including 87 feet of perforations. The Santa Fe Spring Field of Los Angeles Basin has shown a remarkable rejuvenation following a dormancy of several years duration and as a consequence operators are starting a number of new wells in addition to reconditioning work on older wells. New wells started recently in this field include No. 20 Off of the Bandini Petroleum Co., No. 25 Santa Fe of the General Petroluem and No. 64 Bell of the Union Oil Co. In addition to this new work, Whitson & Cox have built a new rig over No. 2 Alexander, an old abandoned well and have already started to make new hole. The Union completed No. 66 Bell in this field a few days ago and this new producer was brought in under a natural flow doing 325 bbls. of clean 33.4 gravity oil and 1,390,000 feet of natural gas per day from 3,691 feet. In the Seal Beach Field, the Continental Oil Co. has installed a compressor on No. 32 Bixby, a new well that was finished a few weeks ago, and production has been increased to 288 bbls. of exceptionally clean 27.6 gravity oil per day from 5,314 feet. At Rosecrans, the Cypress Petroleum Co. has recompleted No. 3 Higgins after drilling and deepening the hole to 6,070 feet and finishing the well with a 3-inch liner carrying 416 feet of perforated.

Montebello

There was no change in the status of drilling operations in the Montebello Field of Los Angeles Basin, although the Universal Consolidated succeeded in recompleting No. 1 Cruz after plugging back the hole from 7,505 feet to 7,010 feet after considerable difficulty. This well was originally completed for 1,000 bbls. flowing, but showed such a substantial drop in production that the Universal Consolidated decided to deepen it in search of deeper production. The attempt was unsuccessful and the hole was subsequently plugged back and as might be expected ran into the usual water trouble which characterized early work. The Standard Oil Co. has not yet picked up the deep pay in No. 75 Baldwin but should do so within the next few days as the well is already down 7,015 feet. The outcome of work on this project is of primary importance as it should throw some light on what operators around the edge of the field might expect in the way of deep production. The company is coring in order to catch the first indication of the deep zone as it is imperative that the water string be landed at the proper point. Another week or 10 days should indicate the potentiality of the deep zone at Montebello which right now does not look as favorable as it did a few months ago. Operators are of the opinion that the Standard will ultimately develop deep production on top of the structure and believe that the deep Cruz zone will be relatively limited in extent.

Ventura Avenue

The Associated and Shell are expected to finish at least one new well each in the deep 57 zone at Ventura Avenue within the next 60 days, as the former's No. 133 Lloyd is rotaing ahead at 9,216 feet while the latter's No. 77 Taylor is making hole at 9,500 feet in an oil sand that looks unusually promising. The Shell is expected to give this well a production test some time during the latter part of August and the outcome of work should exert an important influence on future drilling. The Shell's Taylor well is so located that if commercial production is secured it will justify additional drilling. The Assocated Oil Co.'s deep project will likewise stimulate additional drilling although this company has already finished two good wells in the deep 57 zone which it discovered about two years ago. During the current week, the Associated recompleted No. 40 Lloyd doing 360 bbls. of 27.5 gravity oil and 760,000 feet of natural gas per day on a compressor after plugging back the hole from 7,486 feet to 6,639 feet. No. 18 on the Lloyd lease was recompleted on a compressor doing 90 bbls. per day after the hole had been deepened to 6,100 feet.

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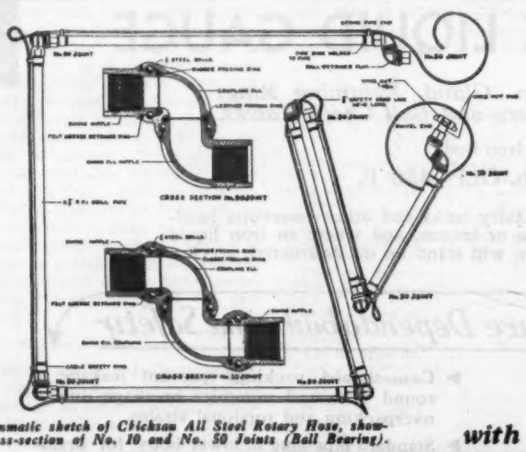

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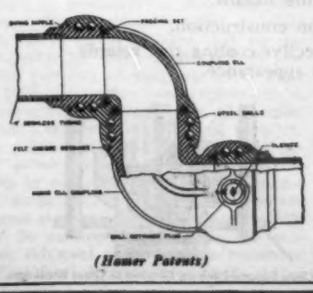

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IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
General Pet., No. 9 Capitan, Santa Barbara Co.	32- 5-30	2,901	Seepe—drlg.
Shell Oil Co., No. 3 Capitan, Santa Barbara Co.	32- 5-30	1,598	sd. sh. drilling
Petroleum Sec., No. 1 Los Alamos, Santa Barbara Co.	6- 7-32	855	sd. sh. drilling
Royalty Ser. Corp., No. 1 Los Alamos, Santa Barbara Co.	35- 9-32	rig	rigging up
Fairview Oil Co., No. 1 Purisima, Santa Barbara Co.	18- 7-34	3,000	fishing D/P
Barnsdall-Rio Grande, No. 3 Doty Elwood, S. Barbara Co.	15- 4-29	5,390	Seape—drlg.
East Elwood Pe., Co., No. 1 Elwood, Santa Barbara Co.	14- 4-29	2,721	suspended
Shell Oil Co., No. 1 Goleta, Santa Barbara Co.	20- 4-28	1,969	hd. sh. drilling
Standard Oil Co., No. 2 Goleta, Santa Barbara Co.	17- 4-28	3,803	hd. sh. drilling
Cuyama Valley Oil Co., No. 1 Cuyama, Santa Barbara Co.	12-10-27	4,165	deepening
Union Oil Co., No. 2 Santa Maria, Santa Barbara Co.	24-10-34	2,370	pump 40 B/D
Richfield Oil Co., No. 1 Rincon, Ventura Co.	17- 3-34	2,607	300 B/D comp.
Woodrow Pet., No. 1 Rincon, Ventura Co.	4- 3-34	7,612	redrig. 5,094
Continental, No. 3 San Miguelito, Ventura Co.	23- 3-24	6,051	O. S. drilling
Texas Co., No. 128 South Mountain, Ventura Co.	4- 3-19	1,263	sd. sh. drilling
Oil Ridge Oil Co., No. 1 Fillmore, Ventura Co.	1- 4-19	1,068	cleaning out
Boisa Chica Oil Co., No. 1 Piru, Ventura Co.	4- 4-18	2,498	will deepen
Piru Oil Co., No. 1 Piru, Ventura Co.	14- 4-18	898	sd. sh. drilling
Pac. Dev. Co., No. 1 Santa Susana, Ventura Co.	12- 2-18	rig	rigging up
Williamson & Donaher, No. 1 Simi, Ventura Co.	36- 3-18	1,016	suspended
American Drlg. Co., No. 1 Simi, Ventura Co.	6- 2-17	533	sd. sh. drilling
Macrate, A. N., No. 1 Ojai, Ventura Co.	27- 4-23	5,052	deepening
Prop. Service Corp., No. 1 Lloyd, Ventura Co.	24- 3-23	5,076	sd. sh. drilling
Kirk, W. A., No. 1 Sulphur Mountain, Ventura Co.	21- 4-22	2,150	br. sh. drilling
Mosher, J. W., No. 1 Santa Paula, Ventura Co.	22- 4-21	2,130	reaming
Las Posas Pet., No. 1 Las Posas, Ventura Co.	22- 3-20	7,370	P. 6,750; idle
International Oil Developers, No. 1 Conejo, Ventura Co.	33- 2-20	3,068	suspended
Standard Oil Co., No. 1 McKittrick, Kern Co.	15-30-22	3,653	stra ght. hole
Casa Mira Oil Co., No. 1 Belridge, Kern Co.	29-28-20	5,172	hd. sd. drilling
General Pe.., No. 1 South Belridge, Kern Co.	30-28-21	11,377	mill on .ubing
Union Oil Co., No. 18 North Belridge, Kern Co.	36-27-20	8,025	hd. sd. drilling
Standard Oil Co., No. 1 North Belridge, Kern Co.	36-27-20	4,528	redrig. 2,200
Associated Oil Co., No. 1 Lost Hills, Kern Co.	2-26-20	7,858	P. 6,850; test.
Oh o Oil Co., No. 1 McVan, Kern Co.	22-27-27	....	location
Mountain View Dev. Co., No. 1 Mountain View, Kern Co.	12-30-28	4,350	suspended
Gilmore Oil Co., No. 1 Mountain View, Kern Co.	24-30-28	5,857	suspended
Union Oil Co., No. 2 Mountain View, Kern Co.	23-30-28	5,580	P. 5,566; test.
Union Oil Co., No. 3 Mountain View, Kern Co.	15-30-28	5,131	sd. sh. drilling
Texas Co., No. 1 Mountain View, Kern Co.	14-30-28	....	location
General Pet., No. 1 Mountain View, Kern Co.	14-30-28	3,694	sd. sh. drilling
Barnsdall, No. 2 Mountain View, Kern Co.	32-30-29	3,015	sd. sh. drilling
Hogan Pet., No. 5 Mountain View, Kern Co.	32-30-29	5,070	sd. sh. drilling
Standard Oil Co., No. 1 Mountain View, Kern Co.	19-30-29	5,843	cleaning out
Hoyt, Otis, No. 1 Mountain View, Kern Co.	19-30-29	4,640	sd. sh. drilling
Shell Oil Co., No. 1 Mountain View, Kern Co.	30-30-29	2,613	sd. sh. drilling
Gilco, Inc., No. 2 Edison, Kern Co.	23-30-29	....	foundation
Monterey Exploration, No. 3 Edison, Kern Co.	22-30-29	2,276	cemented
Jergins Trust, No. 1 Edison, Kern Co.	22-30-29	2,895	O. S. drilling
Jergins Trust, No. 2 Edison, Kern Co.	14-30-29	922	sd. sh. drilling
Shell Oil Co., No. 2 Edison, Kern Co.	15-30-29	343	sd. drilling
Shell Oil Co., No. 1 Edison, Kern Co.	16-30-29	1,472	sd. sh. drilling
Barnsdall, No. 1 Edison, Kern Co.	26-30-29	916	sd. sh. drilling
Centralia Oil Co., No. 1 Edison, Kern Co.	26-30-29	1,413	sd. sh. drilling
Ohio Oil Co., No. 1 Edison, Kern Co.	26-30-29	mtl.	building rig
Commanche Oil Co., No. 1 Commanche, Kern Co.	15-32-29	4,124	sd. sh. drilling
Russ Oil Synd., No. 1 Kingsburg, Fresno Co.	28-12-11	4,004	cleaning out
Bergman, Harry, No. 1 Kingsburg, Fresno Co.	12-12-11	6,133	fish D/P
Western Gulf, No. 1 S.P., Fresno Co.	15-17-15	2,365	abandoning
Union Oil Co., No. 1 Lillis-Kettleman, Fresno Co.	24-21-16	10,344	pull 7-in.
Farrel Pet., Well No. 1, San Luis Obispo Co.	18-31-12	1,091	sd. sh. drilling
Willett Oil Co., No. 3 Cholame, San Luis Obispo Co.	10-25-15	1,790	sd. sh. drilling
Commonwealth Consd. Gas, No. 1 Tulare Lake, Kings Co.	21-22-20	1,899	sd. sh. drilling
Commonwealth Consd. Gas, No. 2 Tulare Lake, Kings Co.	21-22-20	rig	portable outfit
Armadillo Oil Co., No. 1 Tulare Lake, Kings Co.	32-22-20	1,760	cleaning out
Kettleman Pac. Oil Co., No. 1 Tulare Lake, Kings Co.	11-22-16	502	sd. sh. drilling
Weller, Carl, No. 1 Tulare Lake, Kings Co.	11-22-16	900	sd. sh. drilling
Mastodon Oil Co., No. 1 Tulare Lake, Kings Co.	27-24-23	....	material
Trico Oil & Gas Co., No. 1 Atwell, Kings Co.	33-24-22	2,093	sd. sh. drilling
Butte Oilfields Co., No. 2 Marysville, Sutter Co.	25-16-1	4,350	Andesite
Milham Exploration Co., No. 1 Tracy, San Joaquin Co.	5- 4-5	5,800	P 3,350; test
Pure Oil Co., No. 1 Chowchilla, Madera Co.	7-10-14	5,486	sd. sh. drilling

Wildcat Drilling Is Increasing in Michigan Area; Gas Completion Assures Muskegon Pipe Line

By PAUL A. ELLIOTT
Staff Correspondent, Michigan Fields

MUSKEGON, Mich., Aug. 6.—Although wildcat drilling projects are attracting an increasing amount of interest weekly in Michigan, new completions in proved fields led in developments last week with seven new oil producers and two acid testing adding about 3,000 bbls. a day initial, a new gasser making about 15,000,000 feet a day and four dry holes.

Of primary importance among the completions was J. M. Taggart and others' No. 8 on the Fen Johnson lease, C NE NW Section 4-14n-9w, Austin Township, Mecosta County, brought in Saturday with an estimated open flow capacity of 15,000,000 feet a day. This well assures laying of a proposed 55-mile natural gas pipe line from the Austin Pool to Muskegon by the American-Michigan Pipe Line Co. It was drilled into the Michigan sands.

Seven wells were drilled into the Dundee sands in Porter Township, Midland County, with five estimated good for from 30 to 1,200 bbls. a day and two testing for an increase.

Strange and Fortney's No. 5 Campbell, SE NW SE Section 18-13n-1w, Porter Township, was the largest oil completion, about 1,200 bbls. a day. Same company's No. 6 Campbell, SE NE SE Section 18, made about 750 bbls. Columbia Oil & Gas Co. and Gordon Oil Co. brought in their No. 3 Minnie Hale, SW SW SW Section 21, Porter Township, for an initial of 320 bbls., topping Dundee limestone at 3,389 feet and completing at 3,431 feet.

Pure Oil Co. completed two small Dundee wells which may be treated. No. 4 Bond, SW SW SW Section 7, Porter Township, made about 30 bbls. natural. No. 2 F. Howland, NW NW NW Section 23, was estimated good for about 50 bbls. at 3,,420 feet. Fred Turner's No. 4 C. L. Baxter, NE NE NE Section 22, topped the Dundee at 3,370 feet and at 3,405 feet had 1,500 feet of oil in the hole and is drilling deeper. Sayers-Welch-Rosenblum's No. 1 Otway, Section 21, struck bottom water at 3,443 feet but was testing for a Dundee show. Two wells previously drilled into the Dundee showed a good increase after treatment. Gordon Oil Co.'s No. 2 Greene, SE NE NE Section 13-13n-2w, topped the Dundee at 3,401 feet and drilled to 3,438 feet in Jasper Township, Midland County. Treatment increased the flow to 150 bbls. Strange and Fortney's No. 1 Campbell estate, Section 31, Denver Township, was good for about 40 bbls. after treatment.

Dry Holes

Four dusters were completed in Michigan last week in as many townships and counties. Theodore Oil Co.'s No. 1 John Sherwin, SW SW SW Section 13-12n-6w, Home Township, Montcalm County, was dry in the Traverse after being plugged back from the Dundee at 3,335 feet.

W. J. Bernier's No. 1 James Duncan, NE SW SW Section 23-16n-4w, Vernon Township, Isabella County, was abandoned at 3,880 feet. McClanahan Oil Co.'s No. 1 David Frackleton, Section 18, Lincoln Township, also was dry in the Dundee.

Gordon Oil Co. decided to abandon No. 1 Christian Smith, NE NW SE Section 4-8n-11e, dry in the Dundee to a depth of 2,438 feet in Arcadia Township, Lapeer County.

Muskegon Development Co. completed its No. 1 Edward Kolbe, NW SW Section 31-15n-14w, Beaver Township, Newaygo County, as a red rock test at a reported depth of more than 1,000 feet.

New Locations

Five of eleven new locations for which permits were issued were for wildcat locations.

Porter Township, Midland County, locations included: Carter Lease, Inc.'s No. 4 William Maywood Carter, SW NE SW Section 18-13n-1w; Pure Oil Co.'s No. 2-B Laura E. Root, NE SW SE Section 7; Gordon Oil Co.'s No. 1 J. B. Rayner, NE SW NW Section 18; same company's No. 2 J. B. Rayner, SE NW NW Section 18, and McClanahan Oil Co.'s No. 1 S. Densmore, NW SE NW Section 20. Two other proved field locations in central Michigan were: Pure Oil Co.'s No. 7 Fred Sias, SW SW SW Section 8-14n-2w, Greendale Township, Midland County, and Chartiers Oil Co.'s No. 1 Jesse A. Simpson, SE SE SE Section 16-16n-4w, Vernon Township,, Isabella County.

Two western Michigan locations include one in a proved field and one new wildcat. The former is Lima Oil Corp.'s No. 1 Continental Motors Corp., SE NE NW Section 22-1n-16w, Muskegon Township, Muskegon County, and the latter is Reed Oil Co.'s No. 1 John R. Robertson, SW NW Section 23-13n-16w, Otto Township, Oceana County. Drilling already has started on the latter.

Two central and southeastern wildcat locations were placed under permit as follows: Ithaca Oil & Gas Synddicate's No. 1 Andrew Thum, NW SE SE Section 19-9n-1w, Elba Township, Gratiot County, and William C. Sowell's No. 1 Kings Ranch, SE SE SE Section 1-8n-9e.

Deepening permits were issued for Malloy's No. 1 Levi Dack, Section 2-22n-2e, West Branch Township, Ogemaw County, and New York Petroleum Corp.'s No. 1 Marthey, Section 19-15n-3w, Denver Township, Isabella County, which will be carried to the Sylvania at about 4,600 feet.

Mid-State Developments Co.'s No. 1 W. L. Yost, NW SE Section 27-12n-2w, Bethany Township, Gratiot County, will be deepened into the Monroe after failing to strike production in the Dundee.

The Wittmer company is reported planning a test in Section 1, Richmond Township, Osceola County, near Reed City.

Natural gas producers and any others interested in the industry in Michigan were invited to attend a public hearing on proposed new rules and regulations governing the production, transmission and distribution of natural gas at Mount Pleasant, Tuesday, August 7.

Three principal changes proposed include: First, to limit daily production to 15 per cent of the rated open flow capacity; second, to eliminate waste and third, to provide for ratable withdrawal from any pool.

U. S. Bureau of Mines' engineers, who have been checking the gas fields for the past three weeks, expected to complete their survey before the hearing.

Central West Field Makes Best Weekly Showing Reported for Many Months

By GEORGE A. WHITNEY
Staff Correspondent, Central West Fields

FINDLAY, Ohio, Aug. 6.—The Central West fields make the best weekly showing for many months and indications are that work will continue at a more rapid pace than at any time during many months. The Kentucky Field is coming along with better results than for the past couple of years, as the wells to a large extent are good producers. The Lima Field is rather quiet and while the field is supposed to be done so far as new production areas are concerned, there still are fairly good wells found now and then. The past week Wood and others brought in a 60-bbl. initial well in No. 1 on the Edward Orton farm, Section 22, Pitt Township, Wyandot County, at a total depth of 1,442 feet. In Crane Township, same county, Cherokee Oil & Gas Co. is drilling No. 1 Jessie Smalley farm, Section 3, and the New Oil & Gas Co. has a rig up for No. 7 on the Minor Kohler farm, Section 20, same township. Plank Oil & Gas Co. is drilling No. 2 on the Oscar Berg farm, Section 28, Tymochtee Township, same county.

In Hancock County, Carey Oil Co. drilled a dry hole on the J. Dillinger farm, Section 11, Pleasants Township.

In Wood County, Carl H. Schwyne of Cygnet, who bought a large number of wells in the country, abandoned No. 16 on the J. R. Arter farm, Section 35, Liberty Township; No. 18, D. L. Whittaker farm, Section 36, same township, and No. 16, A. Loe farm, Section 6, Bloom Township.

H. F. Kelley and others are drilling No. 1 F. B. Sellers farm, Section 30, Perry Township, Allen County. Carmon Oil Co. is drilling No. 1 T. J. Hadsell farm, Section 13, Bath Township, and C. A. and F. J. Peavey have a rig in No. 2 C. E. Baldwin farm, same section. In Van Wert County, H. C. Miller is starting No. 4 James P. Davis farm, Section 5, Jennings Township. Near Elmore Charles Shell is drilling No. 1 Martin Witty farm, Section 14, Harris Township, Ottawa County.

Failor Oil Co. has a rig on the H. W. Failor farm, Section 32, Tymochtee Township, Wyandot County.

CENTRAL OHIO

In the Central Ohio Field, 16 completions were reported, seven being producers with an initial of 165 bbls., eight gas wells and one dry hole. In Ashland County, Ohio Fuel Gas Co.'s No. 1-5,830 Vern Utz farm, Section 33, Jackson Township, is a gas well at 2,882 feet. Same company is starting No. 1-5,845 W. E. Moore farm, Section 20, same township, and has staked No. 1 J. H. Heffelfinger farm, Section 33, same township. Robison and others' No. 7 Emma A. Devinney farm, Section 9, Lake Township, produced 5 bbls. initial. Metzler and others' No. 8 Clark Alber and others' farm, Section 34, Mohican Township, produced 5 bbls. initial at 669 feet. Ohio Fuel Gas Co. is starting No. 1-5,839 John Mutchler farm, Section 3, Hanover Township.

In Medina County, Ohio Fuel Gas Co. is drilling No. 1-5,863 Elia Briggs farm, Lot 2, Chatham Township. In Lafayette Township, same company is drilling No. 1-5,862 Mable P. Spicer farm, Section 21. Same company has a rig for No. 1-5,867 John W. Selzer farm, Lot 34, Montville Township, and has a rig under way for No. 1-5,872 John Gabris farm, Lot 17, Lafayette Township.

In Lorain County, Dempsey and others made a location on the Mathias Wohlleber farm, Lot 49, Russia Township. In Holmes County, Wittmer Oil & Gas Co. is drilling No. 2 Desboro Campbell farm, Section 8, Ripley Township.

In Wayne County, Ohio Salt Co. is drilling on its fee property in Chippewa Township. Ohio Fuel Gas Co. has a rig in for No. 1-5,863 Lorenzo Keen farm, Section 11, Congress Township.

In Knox County, H. E. Perkins has a rig for No. 1 Sol B. Rice farm, Lot 20, Butler Township. R. H. Bright is drilling No. 29 Mary McKee farm, Lot 29, Harrison Township, and the Ohio Fuel Gas Co. has a rig for No. 2-5,861 George Beckley farm, Lot 1, Jackson Township.

In Coshocton County, Ohio Fuel Gas Co. is drilling No. 3-5,859 Victor Scheibe farm, Lot 11, Clark Township.

In Licking County, Upham Gas Co.'s No. 3 Charles M. Babcock farm, Section 14, Fallsburg Township, produced 80 bbls. inital at 2,980 feet. Blue Rock Oil Co.'s No. 4 Rachael Freece farm, Section 14, same township, produced 30 bbls. initial at 2,996 feet.. Charles Vaughn's test on the Henry Wilkin farm, Section 5, Franklin Township, produced 5 bbls. initial. Wehrle Gas Co. made a location on the George Orr heirs farm, Section 8, Hopewell Township. Preston Oil Co. is drilling Mauk farm, No. 2-1,551, Perry Township.

In Muskingum County, Pure Oil Co.'s No. 3 Frank McKee farm, Section 6, Jackson Township, produced 10 bbls. in-

(Continued on Page 78)

Louisiana Allowables as Announced by State

SHREVEPORT, La., Aug. 4.—The daily allowable for North Louisiana oil fields for August has been fixed at 22,500 bbls., a decrease of 1,700 bbls. from the July allowable, Dr. J. A. Shaw, director of the minerals division of the conservation department, announced.

The South Louisiana fields were allocated a daily allowable of 63,750 bbls. by Doctor Shaw. The allowable was fixed by the minerals division head after Secretary Ickes had allocated 87,200 bbls. a day to Louisiana fields.

The allocation for August follows:

	Bbls.
North Louisiana	22,500
Bayou Choctaw	850
Black Bayou	1,250
Bosco Field	2,400
Caillou Island	4,000
Cameron Meadows	1,650
Edgerly	150
Evangeline	1,500
Gueydan	250
East Hackberry	4,700
Iowa	15,500
Lake Barre	4,850
Lake Washington	1,200
Leesville	10,500
Lockport	1,650
New Iberia	500
Port Barre	2,500
Roanoke	900
Starks	1,000
Sulphur Mines	3,550
Sweet Lake	950
Vinton	3,250
White Castle	550
Total South Louisiana	63,750
Total North Louisiana	22,500
Grand total	86,250

Oklahoma Fields

(Continued from Page 52)

6,582-6,633 feet, total depth, had been shot with 44 quarts of nitro.

Larkin & Warr's No. 1 Katy, CEL NW SE SE Section 34-12-3w, a rig, was the only new operation to start up in Oklahoma County during the past week.

Cleveland County

Near the town of Norman, the wildcat test of Phillips Petroleum Co. and others' No. 1 Baker, C SE NW Section 11-9-2w, Cleveland County, logged the Simpson dense at 7,155 feet, dolomite at 7,330 feet, and at a total depth of 7,432 feet in Simpson dolomite, the crew was fishing for a lost bit.

Tulsa-Okmulgee District

The Texas Co.'s No. 9 Duff, SE SW NE SE Section 11-14-12, Okmulgee County, an old well deepened from 2,670 feet, got a hole full of water in the Wilcox sand from 2,687-94 feet and 5-inch casing was being underreamed in an effort to case off the water.

Colton and others' No. 1-A Berryhill, C NW NW Section 20-14-13, Okmulgee County, which had an estimated 2,000,000 feet of gas in the upper Dutcher sand from 1,056-80 feet, found the top of the Mississippi lime at 2,350 feet and was drilling ahead at 2,450 feet with nothing showing.

Colton and Phillips Petroleum Co.'s No. 1-A Marsey, NW NE SE Section 20-13-13, Okmulgee County, which was plugged back to 1,103 feet from a total depth of 1,122 feet, was completed for 500,000 feet of gas from sand 1,050-84 feet.

Eagle Pitcher Lead & Zinc Co.'s No. 2-A Hope, NE NW SE Section 26-12-12, Okmulgee County, had a show of oil and gas and a hole full of water coming from the Booch sand logged at 1,755-1,994 feet.

Daylo Oil Co.'s No. 1 Walker, NE SE SE Section 13-10-10, Okfuskee County, was dry and abandoned at 1,766 feet, total depth. Several sands were encountered but all were dry.

Dickinson and others have abandoned their wildcat location, No. 1 Webster, NW NE Section 22-10-10, Okfuskee County.

Helmerich & Payne Drilling Co.'s No. 1 Mingo, SE NW NW Section 25-10-10, Okfuskee County, topped Hunton lime at 3,875 feet; Sylvan shale 3,980 feet; Viola lime at 4,057 feet and Wilcox sand at 4,123 feet and was coring at 4,131 feet in dry sand.

First reports and new operations in the Tulsa-Okmulgee district are as follows: J. M. Foltz' No. 2 Sharper, SW NE SW Section 27-15-17, Muskogee County, top Wainright sand 1,150 feet, drilling 1,152 feet; J. M. Foltz' No. 3 Ingram, NE SE NE SW Section 9-15-18, Muskogee County, sand 1,006-50 feet, total depth, dry and abandoned; J. S. Wise and others' No. 1 Yahola, NE NW SE Section 9-12-11, Okfuskee County, rigging up; Rounsville and others' No. 6 Derisaw, SE NE SE Section 30-12-12, Okfuskee County, shut down at 500 feet.

Greater Seminole Developments

The Stanolind Oil & Gas Co. and Amerada Petroleum Corp.'s No. 1 Goodman, SW NE NE Section 5-10-4, Pottawatomie County wildcat test, had Earlsboro sand from 4,405-53 feet, total depth, gauging 465 bbls. of oil in 21 hours, with an estimated 5 bbls. of water per hour. The oil is of low gravity testing 29 degrees at 78 degrees in temperature. The swab was lost in the hole and tubing will probably be pulled.

Wrightsman Oil Co.'s No. 1 Smith, NW SE Section 25-10-7, Seminole County wildcat, Wilcox sand test, was drilling at 4,445 feet in Viola lime.

In the south end of the Searight Pool, Seminole County, Carter Oil Co.'s No. 2 Joe, C W half NE SW Section 2-9-6, had been given an acid shot of 1,000 gallons in the Hunton lime from 4,006-46 feet, total depth, to yield 170 bbls. in 21 hours. It is to be given another shot of acid.

Mid-Continent Petroleum Corp.'s No. 13 Rentie, SE NE SE Section 14-9-6, Seminole Pool of Seminole County, flowed 290 bbls. in 18 hours with no water after Hunton lime from 4,035-43 feet, total depth, had been shot with acid. It had not been completed.

Perkins and others' No. 1-A Coody, NW SW SE Section 18-9-7, East Seminole Pool of Seminole County, swabbed and flowed 165 bbls. of oil net from acidized Hunton lime from 4,051-4,100 feet. It is to be given another shot.

In the Wewoka Extension Pool, Amerada Petroleum Corp. and Stanolind Oil & Gas Co.'s No. 1 Black, SE NW Section 27-8-8, Seminole County, was filling up with water coming from Wilcox sand tagged at 4,227-44 feet, total depth. There was a small show of oil and gas before the water encroachment.

In the same area, Texas Co.'s No. 1 Reed, NW SE Section 27-8-8, Seminole County, found Wilcox sand from 4,182-96 feet, and was swabbing from 5 to 7 bbls. of water per hour with no show of oil.

In the Holdenville sector, Hughes County, Troup and others' No. 7 Haskett, CNL SE SE Section 15-7-8, topped Calvin sand at 1,154 feet, where a show of oil was had. The 6-inch casing was being set on top of the sand.

Winona Oil Co. and Jarvis Drilling Co.'s No. 2 Street, NW NE NW Section 16-7-8, Hughes County, had Booch sand at 2,922-81 feet, which was good for an estimated 2,000,000 feet of gas and 24 bbls. of oil daily. Total depth was 3,004 feet. It had not been completed.

In the Fish Pool, Seminole County, Blackwell Oil & Gas Co. and others' No. 1 Ferguson, NW SW SW Section 29-7-8, on a 48-hour potential test was good for 1,160 bbls. on the swab and it was completed. Production is coming from the Wapanucka lime logged at 2,990-3,051 feet, total depth.

Harris & Haun's No. 1 Harjo, NE SE NW Section 11-6-6, Seminole County wildcat, which was completed in 1933 for 10 bbls. of oil coming from the Cromwell sand around 2,800 feet, has been plugged back and with pipe ripped from 2,100 to 2,112 feet, flowed 133 bbls. Tools were lost in the hole and a fishing job is now in progress.

It is interesting to note that outside of the St. Louis area there was not a new operation reported for the Greater Seminole area during the past week which probably establishes a precedent for this great producing district.

St. Louis District

Marydon Oil Co.'s No. 1-A (Twin) Stalnaker, NE N WSE Section 24-8-4, Pottawatomie County, was a Wilcox sand failure at 4,412 feet, total depth. Wilcox sand topped at 4,387 feet, carried a hole full of water.

Earle Halliburton's No. 3 Pierson, NW SE NE Section 9-7-4, St. Louis Field, Pottawatomie County, swabbed 280 bbls. net in 48 hours from acidized Hunton lime from 3,653-3,716 feet, total depth. It was not a completion.

On the east side of the St. Louis Field, Conley Drilling Co. has completed its No. 1 Vinson, NE cor. 13-7-4, Pottawatomie County, for 524 bbls., production coming from acidized Simpson dolomite found at 3,868-3,983 feet, total depth.

Texokan Oil Co.'s No. 1 Hamby, NW NE NW Section 14-7-4, Pottawatomie County, was an abandoned cellar.

Clark and others' No. 1 Green, SW SE NW Section 15-7-4, Pottawatomie County, pumped 336 bbls. in 24 hours and was a completion. Production is coming from acidized Simpson dolomite tagged at 4,221-66 feet, total depth.

In the south end of the St. Louis Field, Jones and others' No. 2 Lucas, SW NE NW Section 2-6-4, Pottawatomie County, found Simpson dolomite at 4,233 feet, and at 4,254 feet, total depth, hole filled up 800 feet with oil. It was given a shot of acid to yield 130 bbls. of gross oil and then swabbed down. Fishing for bit is now in progress.

First reports and new operations in the St. Louis area consist of the following: Clark and others' No. 1-A Null, NW SE Section 15-7-4, location; Clark

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and others' No. 1-A Standridge, SW NE Section 15-7-4, location; Phillips Petroleum Co.'s No. 2 Curly, SW SE NW Section 22-7-4, old well drilling deeper. Old total depth 3,645 feet in Hunton lime; 4,000,000 feet of gas at 3,800 feet, drilling 3,905 feet.

Pontotoc County

In the Bebee Pool, Manahan Oil Co.'s No. 1 Gray, SW NE Section 25-5-4, Pontotoc County, was drilling ahead at 2,613 feet in Viola lime with 500 feet of oil in the hole and small show of water.

Moore & Deaner's No. 1 Burke, SE NW NE Section 25-5-4, Pontotoc County, missed the Hunton lime, topped Viola at 2,510 feet, and at 2,600 feet, total depth, had 500 feet of oil in the hole and a show of water. Preparations were being made for a production test.

Moore & Deaner's No. 2 Gray "B," NE SW NE Section 25-5-4, Pontotoc County, had Viola lime from 2,448-2,578 feet, total depth, swabbing 270 bbls. in 12 hours. It was not a completion.

Huckaberry Drilling Co.'s No. 3 Miller, SW SE NW Section 27-5-6, Pontotoc County, Conservation Pool, was shut down for orders at 3,347 feet, 5 feet in Wilcox sand, with water filling up the hole.

Southern Fields

Bailey & Johnson's No. 1-A Potts, CEL NW NW SW Section 31-7-14w, Kiowa County, was dry and abandoned at 580 feet.

The deep test of the Carter Oil Co. and Magnolia Petroleum Co.'s No. 1 Harrison, C NW NW Section 28-3n-5w, Grady County, and in the Knox Pool, was drilling at 4,933 feet in shale.

Gypsy Oil Co. finally abandoned its No. 1 Kelly, NE cor. Section 10-1n-20w, Jackson County wildcat. This well was plugged back from 2,084 feet to 1,688 feet at which depth it swabbed 22 bbls. of 43 gravity oil. It was abandoned due to mechanical trouble and a twin well, No. 1-A Kelly, is being rigged up at the same location. The Gypsy Oil Co. evidently has plenty of faith in Jackson County for it is moving in rotary for a test in the SE NW SW Section 11-1n-20w, which will be known as No. 1 Johnson.

T. E. Revels and others' No. 1 Wolfe, NE cor. Section 18-1n-2e, Murray County, is shut down at 2,545 feet with 1,500 feet of water in the hole.

Murray County registered with a new one in Ed Galt and others' staking a location for their No. 1 Aetna Life Insurance Co., SE NW NW NW Section 14-2s-3e.

In northern Atoka County T. A. Edgerly's No. 1 Donham, SE NW Section 26-1n-15e, was rigging up. Brookshire and others' No. 1 Rowland, NW NE NE Section 18-3s-10e, was shut down at 3,695 feet in sandy lime with tools lost in the hole.

Marshall County had one dry hole and one new location for the week: L. F. Wham and others' No. 1 Ulrich, SW NE SW Section 36-5s-6e, was dry and abandoned at 734 feet, total depth. L. F. Wham and others staked a location for their No. 1 Ayers "B," SW NE NE Section 25-7s-5e, Kingston Pool, and were drilling at 316 feet.

South and Southwestern Fields

Ben Russell's No. 1 Fowler, SE NW Section 21-4s-12w, Cotton County, was dry and abandoned at 3,570 feet, contract depth.

Schermerhorn Oil Co.'s No. 17 Marcum, SE NW SE Section 3-4s-3w, Healdton Field of Carter County, was completed for 12 bbls. of oil and 22 bbls. of water from sand found at 910-98 feet. Total depth was 1,085 feet.

Carter County had two new operations in the following: Carter Oil Co.'s No. 1 Bonner, SW SE SE Section 19-3s-2w, location; Ben Barnett and others' No. 2 Lynn, SE NW NE Section 31-1s-2w, Tatums Pool, slush pits.

Stephens County had one dry hole and two new operations as follows: Ports and others' No. 1 Hulshizer, NE SW Section 9-1s-8w, dry and abandoned at 2,503 feet. The first reports were: Magnolia Petroleum Co.'s No. 16 Dillard, SW NE Section 2-2s-5w, old well drilling deeper. Old total depth 430 feet, rigging up; Magnolia Petroleum Co.'s No. 17 Dillard, SE SW SW NE Section 2-2s-5w, old well drilling deeper. Old total depth 438 feet; sand 671-87 feet, total depth, estimated good for 9 bbls. to put on pump.

J. D. Petty Oil Co. has machine in for its No. 1 McMillian, W NW NE Section 16-1s-8e, machine.

Gulf Coast Fields

(Continued from Page 57)

in the BBB&C Survey, Abstract 96, was drilling shale, 3,500 feet.

Victoria County

In Victoria County, Chabtex and others' No. 1 Herman Dietzel, in the Manchola Survey, has been abandoned as dry at 3,600 feet. Humble Oil & Refining Co.'s No. 2 Mitchell, about half a mile south of No. 1, was drilling 4,687 feet in shale.

SOUTH LOUISIANA

During recent weeks Coastal Louisiana has had an extensive lease play with the major leasing taking place in Calcasieu and the neighboring parishes. The Big Woods section, southeast of Starks, has been getting most of the play. Gulf Refining Co. recently leased approximately 650 acres in the area for a reported consideration of $2 per acre. Considerable geophysical work has been shifting to the eastern part of the Louisiana Gulf Coast and extending across the line into Mississippi.

At New Iberia in Iberia Parish, Y. D. Spell's No. 1 Sabiater, 25 feet northwest of No. 1 deep producer, was drilling below 2,646 feet in rock. No. 1 well, recent discovery, at last report was averaging around 800 bbls. daily.

In the northeast extension area of the Hackberry Field, Cameron Parish, Gulf Refining Co.'s No. 14-A Irwin, has been completed for 675 bbls. daily through three-eighth-inch choke with total depth of 6,990 feet. It showed 550 pounds pressure on tubing and 360 pounds on casing. Gravity of the oil tested 32. Texas Co.'s No. 12-B Belcher, also in the northeast extension area, was drilling below 1,800 feet.

Roanoke

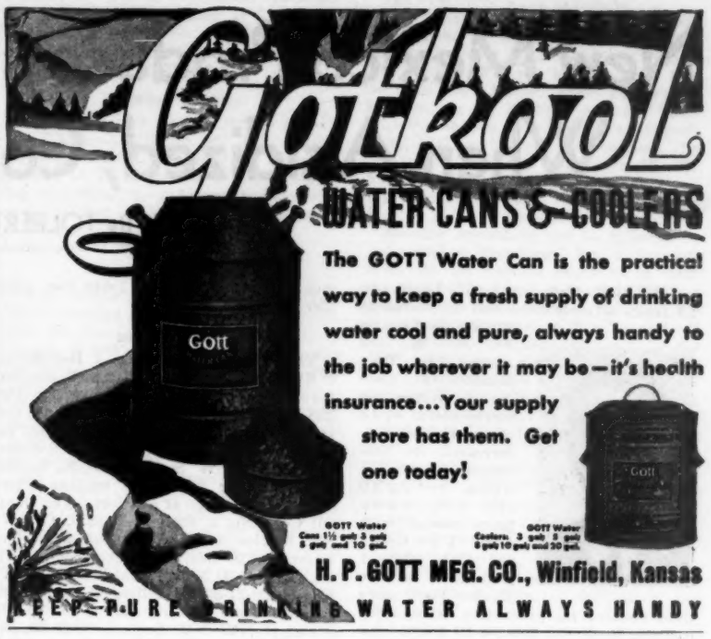
At Roanoke in Jefferson Davis Parish, Humble Oil & Refining Co.'s No. 3 Devilbiss, about three-fourths of a mile southwest of Shell's discovery well, was drilling sand 7,358 feet. Humble's No. 1 Martin Kratzer, about a half mile southwest of the discovery, was drilling shale and lime 6,470 feet. Shell Petroleum Corp.'s No. 1 Jernigan, was drilling brittle shale 7,845 feet. Shell is reported working a three-instrument torsion balance crew south and southeast of Roanoke and in Townships 10s, 3 and 4w. Gulf Refining Co. is reported to have a three-instrument torsion balance crew north of Roanoke and in Township 8s, Range 4w.

At the extreme north end of the Iowa Field, Magnolia Petroleum Co.'s No. 2 Gillison, in Section 12-9s-7w, has been completed for 600 bbls. fluid daily, 50 per cent of which was salt water.

In the Gillis area of Calcasieu Parish, Union Sulphur Co.'s No. 2 Barbe estate, was drilling 7,180 feet. Union Sulphur Co. is reported to have recently purchased one-half the mineral rights under 150 acres about a mile southwest of No. 1 Barbe, for a reported consideration of $2,000. The acreage is out of the SW of Lot 4, Section 11-9-8.

DR. MONROE SUTTON DIES

LOS ANGELES, Calif., Aug. 4.—A throat ailment proved fatal to Dr. Chester Monroe Sutton, 65, retired physician, who had been active in the oil business here and in Texas for the past 15 years. He was interested in several oil development ventures and was an officer of the Luling Oil & Gas Co. of San Antonio, Tex.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New Mexico Producers Greatly Increase Output When Acidized; Colorado Test Has Show

By TOLBERT R. INGRAM
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., Aug. 6.—Leases on 23 tracts of state land will be offered at auction at Santa Fe, N. M., on August 10. The Repollo Oil Co.'s No. 1 Grimes, on northeastern side of the Hobbs Pool, increased its production from 551 bbls. to 3,290 bbls. daily upon being treated with acid. The Gypsy Oil Co.'s No. 1 Bell-State, in the Eunice Pool, more than doubled its production when acidized and made 462 bbls. in 12 hours. An important wildcat between the Copper and Lynn Pools is being started by the Humble Oil & Refining Co. The Continental Oil Co. completed a 29-bbl. well on the Rattlesnake Dome in San Juan County.

The Colorado Oil Refining Co.'s No. 1 Linke, an important wildcat in the Middle Park in Colorado, cut a 30-foot sand showing gas, followed by oil saturation. South Park Oil Co. will abandon its No. 1 Esche in South Park, skid rig, and start new hole.

Two wells to test the Garland structure in Wyoming outside of the unitized area are waiting for approval of Administrator Ickes. Paul Stock's No. 1 Government, in the Oregon Basin Field, made 450 bbls. initial. The Argo Oil Co.'s No. 10 Ellen, in the Hamilton Dome Field, is swabbing 200 to 300 bbls. daily from the Embar. The Atlantic-Pacific Oil Co. has acquired the East Warm Springs Pool in Hot Springs County, and will put 19 wells on production.

Two completions and six locations were reported in the Cut Bank Field in Montana. The Benton Lake structure in Cascade County is to have a test.

The Mountain Fuel Supply Co. is starting a deep well in the Clay Basin district in northeastern Utah, where no wells have been drilled since 1927.

NEW MEXICO

Lea County

Drilling operations in the various Lea County areas are now about on a par with 1930. A number of wells which have been shut down for lack of water are resuming.

Hobbs Area

The Repollo Oil Co.'s No. 1 Grimes, SW NW NW Section 28-18-38, close to the edge on the northeastern side of the pool, which was reported a completion two weeks ago for 551 bbls. the first 24 hours, was given a treatment of 1,000 gallons of acid and showed a big improvement. Through the tubing it made 3,483 bbls. of oil and 7,234,000 feet of gas first 24 hours, and through the casing it made 3,920 bbls. and 8,138,000 feet.

The Shell Petroleum Corp.'s No. 4 Grimes, SE cor. SW Section 28-18-38, spudded July 20, set the 12½-inch at 258 feet with 150 sacks, and is drilling ahead at 820 feet in red beds and shells. The Gypsy Oil Co.'s No. 3 East Grimes, NW cor. NE Section 33-18-38, is drilling at 3,625 feet in anhydrite and had a show of oil at 3,162-68 feet. Same company's No. 3 Graham, SW cor. NE Section 24-18-37, is drilling at 1,855 feet in salt. The Stanolind Oil & Gas Co.'s No. 8 Turner, C NW NW Section 34-18-38, cemented the 10¾-inch at 1,648 feet with 350 sacks and is waiting.

Eunice Area

The Gypsy Oil Co.'s No. 1 Bell-State, C SW SE Section 8-21-36, which was reported a completion two weeks ago for 358 bbls. initial, was acidized and responded with a production of 462 bbls. in 12 hours. The Gypsy's No. 1 Bell-Ramsey, C NW SW Section 9-21-36, began spudding July 24 and is waiting after cementing the pipe at 392 feet. The Ohio Oil Co.'s No. 2 State-McDonald, C NW SW Section 14-22-36, is shut down for water at 320 feet. The Continental Oil Co.'s No. C-20 No. 21 State, C SW NW Section 20-21-36, is drilling at 3,100 feet in hard lime, and its No. C-20 No. 1 State, C NW NW Section 20-21-36, is bottomed at 3,890 feet in lime and making a drill stem test to set pipe. The same company's No. 8-B No. 1 Meyers, C SE NW Section 8-21-36, has derrick completed. The Repollo Oil Co.'s No. 1 State, NE NW NE Section 19-21-36, shot off drill stem at 3,800 feet, cemented the 6⅝-inch at 2,856 feet, and will set whipstock and drill by tools. Total depth is 3,850 feet. The Tidewater Oil Co.'s No. 2 State-Foster, C SE NE Section 8-21-36, is rigging up rotary. The Texas Co.'s No. 1 Rector, C NE SE Section 30-21-36, began spudding July 22 and is running the 12½-inch at 675 feet, in the red beds.

Cooper Area

The General Crude Oil Co.'s No. 2 Meyers, C SE SE Section 22-24-36, cemented the 9⅝-inch on bottom at 1,382 feet, in salt, with 200 sacks, and is waiting. The Phillips Petroleum Co.'s No. 1 Woolworth, NW cor. SW Section 23-24-36, is shut down for water at 3,145 feet, in lime, and its No. 2 Woolworth, NW NE SW Section 23-24-36, is drilling at 1,120 feet in red rock. Same company's No. 3 Woolworth, SW cor. NW Section 23-24-36, is bottomed at 315 feet, in the red beds, and cemented the 12½-inch at 306 feet with 175 sacks, and its No. 4 Woolworth, C SW SW Section 23-24-36, cemented the 12½-inch at 325 feet with 175 sacks. Last named began spudding July 19. The Stanolind Oil & Gas Co.'s No. 1 Meyers, SE cor. NE Section 22-24-36, is drilling at 1,930 feet, in lime. The Texas Co.'s No. 1 Ogg, C SW NE Section 35-24-36, is drilling at 841 feet, in the red beds, and the Humble Oil & Refining Co.'s No. 1 Cooper, C NW NE Section 23-24-36, is waiting after cementing the 12½-inch at 316 feet with 175 sacks.

A new operation in the Cooper area is the Humble Oil & Refining Co.'s No. 1 J. L. Coats, C NW NE Section 10-24-36, a location. This will be an important test due to its location between the Cooper and the Lynn districts, being 3 miles south and a half mile west of the Continental Oil Co.'s No. 1 Lynn, a gas well, 2½ miles north of the General Crude Oil Co.'s No. 1 Meyers. A producer at this location would point to the territory between the Cooper and Lynn Pools being one continuous field.

Lea Area

The Texas Co.'s No. 2-B Lynch, C SE SW Section 27-20-34, which was plugged back from 3,750 feet to 3,656 feet, is pumping water only and making 5 to 10 bbls. daily. It is half a mile east of a dry hole and north of the Lynch wells in the Lea Pool. The Texas Co.'s No. 1 Lea, SW cor. NW Section 14-20-34, in the new North Lea Extension, failed to get a shutoff after plugging back from 3,688 to 3,600 feet, due to failure of cement, and will try again.

Eddy County

The Skelly Oil Co.'s No. 1 Lea, C NW NW Section 23-17-31, Maljamar area, is drilling at 330 feet in red sandy shale. It began spudding July 21.

San Juan County

The Continental Oil Co.'s No. 36, SW cor. NW Section 12-29-19, Rattlesnake Pool, was completed at 748-756 feet in the Dakota and is flowing 29 bbls. daily.

R. C. Oswell's No. 6 Government, SE NE Section 33-30-11w, Aztec district, to the southwest of his four shallow producers, is moving in materials. Finley & Johnson's No. 1, NE NW Section 22-29-11w, is spudding at 60 feet, and Nick Spatter's No. 1, C NE SW Section 32-31-11, ran the 8¼-inch to 740 feet and is drilling below 780 feet.

Jal Area

The Repollo Oil Co.'s No. 2-A Stephens, NW cor. NE Section 13-25-36, is bottomed in the red beds at 500 feet and is reaming to run casing. The Continental Oil Co.'s No. 13-A No. 1 Sholes, C SW SE Section 13-25-36, has cemented off tools at 3,268 feet, total depth, after sidetracking and will drill out and run the 6⅝-inch.

COLORADO

Grand County

A wildcat being drilled on the Granby Structure in Middle Park, Grand County, by the Colorado Oil Refining Co. in its No. 1 Links, NE SW SW Section 13-1n-77, attracted considerable attention this week when it encountered a good show of gas in the top of the first objective sand, followed by a show of oil. The objective of the test is the three sands in the Pierre shale known as the Hygiene group. The first sand was found at 1,058-88 feet, being 30 feet thick. The gas was not gauged, but was estimated at around 250,000 feet through the 10-inch casing. While some gas was encountered above the sand, it did not flow constantly as it did in the sand. About the middle of the sand the hole ran into a little water. The water rose 60 feet in 12 hours and then stopped, showing no increase. The hole then went into a shale break and beneath the shale it penetrated a thin sand 1 to 1½ feet thick, showing oil saturation. Drilling is continuing to the second sand of the group and later casing will be run for a formation shutoff. Middle Park is one of the three large natural basins in Central Colorado. Oil and gas have been found at Walden, in the North Park, and two tests are now under way in Middle Park and two in South Park.

Adams County

Sidney H. Keoughan, Riddle Petroleum Co. and others' No. 1 Baxter, C SW Section 2-3s-66, 10 miles northeast of Denver city limits, in the Derby district, which is to be a 9,000-foot rotary test to the Dakota, let contract to Wilson Smith, rig builder, for 122-foot reinforced steel derrick, and he began pouring derrick foundations this week.

Park County

The South Park Oil Co.'s No. 1 Esche, SE cor. NW Section 5-9s-76, Como district, in South Park, which has made no new hole for nearly three years on account of mechanical difficulties, is preparing to plug and abandon and skid rig 25 feet to the east. New hole will be known as No. 1-B Esche. Decision to abandon and start new hole followed three failures to cement off tools and pipe after sidetracking, the cement not holding. This test had a show of oil at 1,040 feet in the equivalent of the Hygiene, and another at 1,157 feet. At around 2,360 feet it had a good show of oil in what is believed to be the Muddy, first sand in the Dakota group. This show looked as if it might be commercial, but the hole was drilled through the sand into water and no test was obtained on account of a bad fishing job.

The South Park Oil Co.'s No. 1 State, SE cor. SW Section 16-11s-75, Hartsel district, is rigging up.

Moffat County

The Stanolind Oil & Gas Co.'s No. 33-SD Parkinson, SE SW SE Section 22-4n-92, Iles Dome, which was completed at 3,294 feet, corrected depth, in the upper Sundance in 1928 for 960 bbls. initial, is being deepened to determine the thickness and productivity of the Sundance sand to bottom of that formation. It cored to 3,371 feet, at which depth it was still in the Sundance, and stopped to test. Heavy saturation was encountered, but no report of quantity production was made. It will resume to core through the Sundance. This well is near the top of the structure. Some of the producers lower on structure found the heaviest saturation some distance into the sand.

The Mountain Fuel Supply Co.'s No. 4-B Wilson, C NE NW Section 23-12n-100, Hiawatha Dome, which tested heavy gas flow and 24 bbls. of oil in 26 hours in sand at 2,304-37 feet, is coring in a lower sand at 2,878 feet. This well is located one-third of a mile to the northwest of No. 1 Wilson, the discovery well, drilled by William A. Meyers and associates, which blew in at 2,200 feet for 57,000,000 feet of gas in 1926. No. 1 Wilson is now reported spraying 20 bbls. of crude oil of 39 degrees gravity per day along with the gas. The production comes from the Wasatch formation. The Texas Co.'s No. 1 Van Schaick, SW cor. Section 19-12-100, is drilling at 1,720 feet.

Routt County

The Texas Co.'s No. 1 Sampson, SE NE SE Section 2-1s-85, King Mountain, is drilling at 950 feet with the 13⅜-inch at 875 feet. Same company's No. 5 Carstarphen, NW NE NW Section 5-6n-86, Tow Creek, is cleaning out after shot at 3,945 feet, total depth. It made 3½ bailers of oil in 24 hours at 3,880 feet and does not look encouraging.

Jackson County

The Continental Oil Co.'s No. 3 Hoye, NW cor. NE Section 34-9n-78, South McCallum, is bottomed at 520 feet and redrilling at 300 feet to straighten.

Montezuma County

The McElmo Oil Co.'s No. 1 West, NE NW NE Section 31-36-17, McElmo district, is running the 6¼-inch to bottom at 1,750 feet.

Prowers County

The Trojan Oil & Gas Co.'s No. 1 Lotus Oil, NW NE NE Section 15-23-46, Lamar district, is drilling at 3,407 feet in gray lime.

WYOMING

Big Horn County

Peter Evanoff and others, have made a location and moved in derrick materi-

als for their No. 1 Griffin, Lot 53-55-97, southwestern side of the Garland Dome. Location is close to the unitized area of the Ohio Oil Co. and Utah Southern Oil Co., but the operators are not parties to the unit agreement. Approval to drill has not yet been granted by the Oil Administrator. The acreage is within the producing structure as outlined by the U. S. Geological Survey. The development program of the operators in the area does not call for any wells, but other operators on the structure are desirous of going ahead with tests to determine by the drill the productive area of the structure. The situation in regard to this well is similar to that of the Kinney-Coastal Oil Co., which is waiting for approval of a proposed test.

J. W. Bales is rigging up for a test on the Ziesman Structure in his No. 1 Parker, C SW SW Section 23-49-89. It will start in the Tensleep and the Madison is expected at 800 feet.

W. O. Taylor and others' No. 1 Hoskins, Lot 5, Section 25-56-97, Byron Dome, which Sidney H. Keoughan recently contracted to deepen with rotary from 2,855 feet to the Madison lime, is now running tower. The 10-inch was recovered and shoe drilled up. The Ohio Oil Co.'s No. 2 Byron-Union, C SE NE Section 22-56-97, is drilling at 2,580 feet.

Park County

Paul Stock's No. 1 Government, SE cor. NE Section 29-51-100, Oregon Basin, the first well drilled on this structure in several years, had an initial production of 450 bbls. from pay at 3,595-3,636 feet. Total depth is 3,636 feet. It is an offset on the west to Charles E. Orchard's No. 1 Rue. The Dry Creek Oil Co.'s No. 1, Lot 2, Section 9-50n-100, south end of Oregon Basin, a test of a fault block, is drilling at 100 feet after cementing the 15½-inch at 59 feet. The Stanolind Oil & Gas Co.'s No. 6 Rosenberg, NW cor. Section 25-58-98, Frannie Dome, is rigged and ready to spud.

Hot Springs County

The Argo Oil Co.'s No. 10 Ellen, NW SE NW Section 14-44-98, Hamilton Dome, topped the pay at 2,676 feet and was drilled to 2,795 feet. It is swabbing 200 to 300 bbls. daily from the Embar. It is a south offset to the Empire State's No. 4 Republic. The California Exploration Co.'s No. 1 Government, NE SE NE Section 12-44-97, Waugh Dome, is drilling at 2,000 feet.

Fremont County

The Monongahela Oil Co.'s No. 1 Wisda, NE SE SE Section 13-28-93, Crook's Gap, began coring for the Frontier at approximately 2,700 feet. The Mid-American Oil Co.'s No. 1 Government, NE SW Section 4-28-92, Sheep Creek, is drilling at 887 feet.

Herbert Stokes, president of the Atlantic-Pacific Oil Co., which owns and operates the Dallas-Derby Field in Fremont County, when in Denver this week, told the writer that his company recently deepened its No. 3 well to the third Embar pay and that it responded with a daily production of 25 bbls. When it is stated that this well was drilled in 1883 and has been producing for 51 years, it becomes more than ordinarily interesting. The Dallas-Derby Field is one of the older Wyoming operations and produces black oil mostly from the Embar formation. Several test wells have been drilled to the Tensleep where 150 feet of saturated formation was found, but most of the production is being taken from the upper horizon until such time as additional supplies of crude are needed. Below the Tensleep there are prospective pays in the Amsden and Madison and possibly the Devonian.

The two structures were acquired by the Atlantic-Pacific Oil Co. in 1930 and the management has been successful in operating the properties. The wells are pumped with modern electric equipment and the crude is put through a dehydrating plant and shippd through its own pipe line to Wyopo station on the Chicago & Northwestern Railroad. The Standard Oil Co. of Indiana purchases 600 bbls. a day and the field has met its requirements for the past year without an expensive drilling program by keeping the wells cleaned out and operated at their highest efficiency.

Recently the Atlantic-Pacific Co. acquired the state lease on Section 36-43-94, in Hot Springs County, comprising practically all the productive acreage on what is known as the East Warm Springs Dome. The field has been shut in for many years and, in fact, has never marketed any large quantity of its developed capacity. There are 19 wells in the field completed in the Embar at around 900 feet. The same methods employed successfully in the Dallas-Derby Field will be employed here. The wells will be electrically equipped for pumping and a dehydrating plant constructed. A pipe line probably will be built to Thermopolis. The structure lies just to the east of the West Warm Springs Dome where there is some shutin production of black oil controlled by the Shaffer interests.

Albany County

The Ohio Oil Co.'s No. 1 Chappell, C SE NW Section 28-21-76, East Rock River, is drilling at 4,178 feet in the red beds.

Carbon County

Earl W. Reeder, Inc.'s No. 1 Union Pacific, C SW SW Section 19-20-83, Overland Dome, is drilling at 5,150 feet. The Ohio Oil Co.'s No. 1 Sid Morris, C NW SE Section 6-20-77, Diamond Dome, is shut down at 2,240 feet.

Niobrara County

The Interstate Oil & Refining Co.'s No. 1 Morrell, NW NE SE Section 2-39-61, West Mule Creek, which is 2 feet in a sand at 2,840 feet, total depth, showing saturation, is underreaming the 4¾-inch 200 feet off bottom to set on top of the pay.

MONTANA

Glacier County

Two completions and six new locations were reported in the Cut Bank Field. The Montana Headlight Oil Co.'s No. 2 Yunck, C NW SW Section 1-34-6w, was completed at 2,790 feet and the oil rose 2,300 feet in the hole. It looked like a better-than-the-average well, but swabbed only 50 bbls. the first 24 hours. It is believed the oil was held back under gas pressure. The pay was at 2,766-80 feet. The other completion was the Santa Rita Oil & Gas Co.'s No. 3 Whetstone, C NE NE Section 27-35-6w, which swabbed 2 bbls. an hour for the first 4 hours from pay at 2,900-08 feet. Total depth is 2,916 feet.

Initial Production of Turner Valley Well Rivals Famous Royalite No. 4 Gusher

By VICTOR LAURISTON
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, Aug. 4.—In the new southerly extension of the Turner Valley Field, Highwood-Sarcee Oils' No. 1, LSD 16, Section 21-18-2w5, is being finished 412 feet in the Madison lime at 5,760 feet. It made around 28,000,000 feet of wet gas, and naphtha recovery on one separator with approximately 1,000 pounds back pressure runs over 500 bbls. a day, with a peak reported of 610 bbls. A second separator is being installed, which is expected to materially increase the production. Highwood-Sarcee's No. 1 previously got a large gas flow and a good production of light crude in the Dalhousie sand between 5,046 and 5,073 feet. Light crude production was estimated between 100 and 200 bbls., the highest ever encountered in the Turner Valley Field in this horizon. Drilling was continued into the lime, the upper horizons of which yielded an unusually large gas flow with substantial naphtha recovery, and the well has been drilling two tours and taking production during the third shift, making better than 90 bbls. a day. It had been deepened a few feet into the brown porous horizon of the lime and the tools lifted when the well blew itself into big production. Initial production from the lime is one of the largest in the history of the field, ranking with Royalite's No. 4 gusher.

The test will probably be finished at the present depth, the tremendous gas pressure making it difficult to go deeper. Additional storage for 1,500 bbls. of naphtha has been installed. A shareholders' meeting is being held at Calgary this week to consider drilling a second well. The company is headed by A. W. Dingman, pioneer of the Turner Valley Field, whose Calgary Petroleum Products Co. 20 years ago secured the first light crude production in Turner Valley in its Dingman No. 1.

Highwood-Sarcee Oils' No. 1 definitely extends the proven field approximately a half mile along the southeast trend of the structure. It is the first producer drilled in Section 21. Several other companies are now drilling in this section, and as a result of the new strike a number of additional tests will likely be spudded this month in Section 21 or farther south.

Highwood-Sarcee's No. 1 is the first well to get deep lime production outside the Benton area. In the main portion of the Turner Valley Field the Benton shale is the outcropping formation; but toward the south end of Section 28-18-2w5 this formation is overlain by the Belly River, which necessitates deeper drilling. The Highwood-Sarcee producer proves that this extra depth is not an insuperable object to securing production. Some miles farther south, on the Pekisko Hills structure, Pekisko Co.'s No. 1 got the lime at 1,071 feet, indicating the formations rise in that direction, though whether the field is continuous remains to be determined.

Far South Tests

In Section 21-18-2w5, North West Royalties' No. 1 Prairie, LSD 5 has encountered a large gas flow near the Belly River-Benton contact at 1,170 feet. This is a new potential producing horizon, absent in the older portion of the Turner Valley Field where the Benton is the outcropping formation. In the same section, Myers & Wright's No. 2 Pacalta, LSD 14, offsetting Highwood-Sarcee's No. 1 producer to the west, is below 720 feet. Union-Freehold Oil Corp.'s No. 1, LSD 8 is below 4,000 feet and logging closely with the producing wells farther north, Highwood Royalties' No. 1, LSD 3, the farthest south test, is below 510 feet.

In the southeast corner of Section 28-18-2w5, Spooner Oils' No. 5 Anaconda, LSD 1, encountered an unexpected show of light crude in the lower Dalhousie sand at 5,012 feet after failing to get production in the brown sand. It is drilling below 5,035 feet. Farther west, Carleton Royalties' No. 1, LSD 2, offsetting Highwood-Sarcee's No. 1 to the northwest at a distance of 300 yards is below 706 feet and logging somewhat higher.

Still farther north and west, in the same section, Richfield Royalties' No. 1, LSD 5, is in a changing formation below 3,550 feet. To the east and south, British Dominion Oil & Development Corp.'s No. 4, LSD 6, is drilling and carrying casing below 2,200 feet. On the next location to the east, Pacalta Oils'

(Continued on Next Page)

The first reports are as follows:

The Texas Co.'s No. 2 Schlag, C SE SW Section 26-35-6w, rig up, and same company's No. 2 M-358 Morrison, E SW NE Section 22-35-6w, rig up. The Par Oil Co.'s No. 4 Haines, E SE SE Section 2-34-6w, rig on location, and the Montana Power Gas Co.'s No. 1 Van Ormer, C SE SW Section 8-33-5w, location. The Indian Oil Co.'s No. 2 Winkler, W SW SW Section 23-35-6w, rigging up, and Lon Crumley's No. 1 Jones, C NW SE Section 31-34-5w, a location.

Routine operations are as follows:

Annand & Hutchings' No. 1 Bonnett, NW cor. SE Section 10-32-5w, is drilling at 2,922 feet and is reported to have encountered some water. This location is one mile northeast of The Texas Co.'s No. 1 State, the discovery well in the South Cut Bank district. Same firm's No. 1 Federal Land Bank, NW cor. SW Section 11-34-6w, is drilling at 2,650 feet.

A. B. Cobb's No. 3 Walberger, NE SW SE Section 35-35-6w, is drilling at 2,510 feet.

The Dakota-Montana Oil Co.'s No. 1 Winkler, C NW NW Section 26-35-6w, is drilling at 2,375 feet.

The Grant Oil Co.'s No. 2 Yunck, C SW SW Section 14-34-6w, set the 10-inch at 545 feet.

The Indian Oil Co.'s No. 1 Fee, C SE SE Section 4-34-6w, is drilling at 890 feet.

Lawler & Hoerr's No. 1 Harland, C SW SW Section 5-33-5w, cemented the 10-inch at 505 feet.

The Montana Headlight Oil Co.'s No. 2-A Williams, C NE NE Section 11-34-6w, is drilling at 2,100 feet. The Montana Power Gas Co.'s No. 1 Hawkins, C SW Section 17-33-5w, is fishing at 2,680 feet, and its No. 1 Pioneer Lumber Co., SE cor. Section 21-35-5w, is rigging up. Same company's No. 1 Whetstone, C SE NE Section 7-33-5w, is drilling at 2,818 feet and had a show of oil at 2,790-2,800 feet.

Nyhagen-Bell's No. 3 Anderson, NE NW SW Section 26-35-6w, is drilling at 1,330 feet.

The P-M-K Petroleum Co.'s No. 1 Mattson, C NW NW Section 14-34-6w, is drilling at 1,975 feet.

The Santa Rita Oil & Gas Co.'s No. 4 Whetstone, SE NE Section 22-35-6w, set the 12½-inch at 549 feet.

R. C. Tarrant's No. 4 Britton, C SW SW Section 12-34-6w, is a cellar, and his No. 2 Getty, NW cor. SE Section 2-34-6w, is drilling at 2,100 feet. His No. 1 State, C SE SE Section 36-34-6w, is spudding at 75 feet. The Texas Co.'s No. 1 M-313 Hessler, C NE NW Section 20-33-5w, is rigging up cable tools, and its No. 4 Hinkle, C SE NE Section 2-34-6w, is bottomed at 2,760 feet and waiting on spudder to drill in. Texas Co.'s No. 2 Kearns, W NW NW Section 23-35-6w, is waiting on spudder at 2,814 feet, and its No. 1 M-358 Morrison, Lot 5, Section 22-35-6w, is drilling at 2,420 feet. Same company's No. 4 Purdy, SW SW Section 35-35-6w, is drilling in at 2,937 feet.

Big Horn County

The California Independent Oil Co.'s No. 3-8, SW NW NE Section 34-6s-32, Soap Creek, is bottomed at 1,620 feet, at which depth it will set the 8¼-inch on top of the Amsden. It had a show of oil in the Tensleep at 1,550-60 feet.

Carbon County

The Ohio Oil Co.'s No. 14 Maddox, C NW NW Section 10-7s-21, Dry Creek, is shut down at 4,842 feet for new drill pipe.

Ponilera County

The Barmac Oil Co.'s No. 1 Bruning, C SW SW Section 1-31-5w, Vallier district, is drilling at 2,400 feet with the 8¼-inch at 2,363 feet.

Cascade County

The Benton Lake Structure is to have a test in C. Leonard Smith's No. 1, NE cor. SW Section 14-22-2e, which spudded and shut down to complete rigging. Location was spotted by C. D. Johnson of Denver. It is a long narrow anticline running in a north-south direction through Townships 22 and 23 North,

Range 2 East. The south end is closed by a fault zone and the location is on the upthrow side of a large fault in the zone. The Kootenai is expected at 800 feet, the Ellis at 1,200 feet and the Madison at 1,375 feet.

Petroleum County

The Minnesota-Flatwillow Oil Co.'s No. 1 Farrell, C SW SW Section 5-15-29, Cat Creek, ran the 8¼-inch to bottom at 980 feet and is drilling ahead.

Teton County

Ned Cheadle and others' No. 1 Balsinger, NE SE NW Section 20-27-5w, West Pondera, is drilling at 2,150 feet.

Liberty County

J. H. Hamilton and others' No. 1 Northern Farms, C NE SW Section 10-37-5e, is drilling at 840 feet. John Wilde's No. 2 Mahoney, W SW E Section 23-37-4e, Whitlash district, is drilling at 600 feet.

Toole County

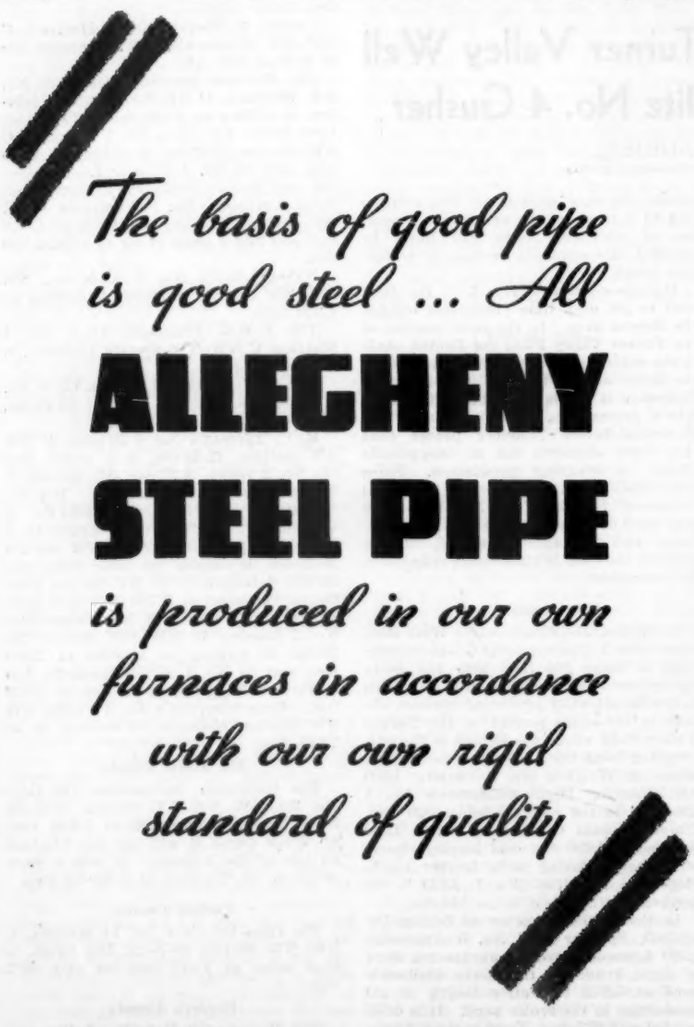
In the Devon district, C. Leonard Smith's No. 1 McDonough, NW cor. Section 17-33-2e, is swabbing 1½ bbls. of oil a day at 1,570 feet, total depth, and gas is showing some increase. Bridge will be set at 1,140 feet and pipe cemented at that depth. His No. 1 Eckholt, C SE Section 6-33-2e, is spudding at 150 feet, and his No. 1 Federal Land Bank, C NE SE Section 11-33-1e, spudded to 110 feet and shut down. Smith's No. 1 Halverson, C NE SE Section 18-33-2e, is spudding at 175 feet, and his No. 1 Lake City, C NW SE Section 17-33-2e, is rigged and ready to spud.

In the Kevin-Sunburst Field, one new location was staked in the Potlach Oil & Gas Co.'s No. 2 Fee, NW SW SW Section 21-34-1w.

William McKnight's No. 1, SE NW SW Section 19-35-2w, is drilling at 150 feet, and Vanderpas-Hepstad's No. 8 Helgerson, NW NW Section 28-35-1w, topped red beds at 1,150 feet and is drilling at 1,175 feet.

UTAH

The Mountain Fuel Supply Co. is entering the Clay Basin district in Daggett County and its No. 2 Murphy, S SE NE Section 21-3n-24, is rigged and ready to spud. This is the first operation in the district since 1927 when the Producers & Refiners Corp. completed a gas well at 5,445 feet in the SW NW Section 22-3n-24. Clay Basin was included in the original plans as one of the sources of gas supply for the Western Public Service Co.'s gas system into Utah.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Canadian Fields

(Continued from Preceding Page)

No. 1, LSD 7, is in the Madison lime below 5,120 feet after sidetracking lost tools. It has fair oil and gas shows in the lime, and should be the next producer. On the east side of the section, Publix Oil & Gas Co.'s No. 1, LSD 8, has encountered almost continuous small oil and gas shows through the Blairmore and got a wet gas flow, estimated 3,000,000 feet a day, in the Home sands below 4,365 feet. It is drilling below 4,380 feet, and is expected to get light crude in the brown sand of the Dalhousie formation around 4,600 feet.

In the northwest corner of Section 28-18-2w5, Turner Valley Royalties' No. 1 Bell & Brown, N half LSD 13, is temporarily shut down below 3,055 feet. Farther east, Century Royalties' No. 1, LSD 14, is in the hard belemnite formation just above the Madison lime at 5,787 feet. In the northeast corner of the section, Director Royalties' No. 1, LSD 16, is below 3,800 feet.

Test Starting

In Section 28-18-2w5, Renfrew Royalties, Ltd., is starting a test on a 40-acre tract in LSD 3. Location has been made some 800 yards west and north of Highwood-Sarcee's No. 1 producer, and south of British Dominion's No. 4 in LSD 6. Steel derrick is being erected and cable tools will be used, with Frank H. Becker in charge. The test is being backed by W. Fay Becker and associates of Calgary, who financed drilling of Becker Syndicate's No. 2 Anaconda in the same section, and who last fall arranged for development of the acreage, originally held by Harry Morris and Stewart Goodfellow of Vancouver, B. C.

South Turner Valley

In the older South Turner Valley area, Nolan-Hungerford Royalties' No. 1, LSD 5, Section 34-18-2w5, is running 12½-inch casing in the old Rand Petroleum well preparatory to making new hole from 280 feet.

In the Mercury tract, Mercury Oils' No. 6, LSD 12, Section 4-19-2w5 has run 15-inch casing and is making new hole from 1,945 feet.

Central Turner Valley

In the Central Turner Valley Field, New McDougall-Segur Oil Co.'s No. 7, Section 12-20-3w5, is below 2,260 feet.

Trinity Petroleums, Ltd. has been incorporated at Calgary to drill for light crude in Central Turner Valley. It plans a maximum of 10 wells on the McDougall-Segur acreage in Section 12-20-3w5. Operations can be carried only to the crude oil sands, as the McDougall-Segur Exploration Co. and the New McDougall-Segur Oil Co. some years ago sold their limestone rights to the Royalite Oil Co. This is the first company formed for the sole purpose of testing the crude oil horizons above the lime. Good yields of light crude have been encountered in a number of deep tests in Section 12-20-3w5 and Section 1-20-3w5, and the Alberta government geologists have been urging systematic development of crude oil potentialities. A test made some time ago by the New McDougall-Segur Oil Co. indicated that, with the lower cost of drilling and casing, wells in this horizon would prove fairly profitable.

Royalite Oil Co.'s No. 4, LSD 12, Section 7-20-2w5, is cleaning out to restore gas production.

Aldersyde Test

On the Aldersyde structure east of Turner Valley, Ranchmen's Gas & Oil Co.'s No. 1, LSD 16, Section 13-20-28w4, is running casing to 6,265 feet. Oil and gas shows were reported just before operations shut down and these will be tested. A number of companies have taken up acreage recently on the Aldersyde dome.

Tests in the Foothills

In the forest reserve area west of Olds, Hunter Valley Oil Co.'s No. 1 McLaren, LSD 12, Section 13-31-10w5, is at 3,075 feet after cementing casing.

West of the Turner Valley Field, on the Rickert structure, Paramount Oils' No. 1, LSD 2, Section 28-18-4w5, is below 3,000 feet with small oil shows.

On the Pekisko Hills structure, south of Turner Valley, Pekisko Co.'s No. 1, LSD 6, Section 6-17-2w5, is below 1,480 feet with a considerable increase in gas flow. The gas comes from the Madison lime, encountered at 1,071 feet, and unlike the Turner Valley product from the same horizon is a dry gas.

On the Highwood-Sinclair structure, Canadian Royalties' No. 1 Banner, LSD 6, Section 34-17-3w5, is cleaning out to 625 feet and has developed a small gas production.

Watson Structure

On the Watson structure west of Lundbreck, Mar Jon Oil Co.'s No. 3 Prairie, LSD 3, Section 4-10-2w5, is moving rig from the old Anglo-Western location on the Milk River structure. Raven Oils' No. 1, Section 20-9-2w5, has cemented off water at 415 feet. Union Drilling Co. of Calgary has taken charge of operations and will complete the well in return for an interest in production and a block of acreage.

Cariboo Oil Prospect

Possibilities of oil over an area of 2,000 square miles in the Cariboo district of British Columbia are indicated by a survey made by O. T. E. Majors. According to Mr. Majors, the potential area is bounded on the north by the Fraser and Nechako Rivers and extends southeast between 20 and 26 miles. The eastern boundary is at the southeast angle of Willow River and the western fold runs in a fairly straight line from Bedrock Canyon across the upper end of Hixon Creek. The fold continues between Lodi and Ahbau Lakes, trends east to Barkerville, and then south and southwest, to the west of Swamp River. It then veers west, crossing Swift River, Victoria Creek, and the Quesnel and Fraser Rivers.

An earlier survey by geologists led the Patrick Syndicate to drill a test on the Australian ranch near Quesnel. This apparently encountered some traces of oil but owing to drilling difficulties was not carried to conclusive depths. Most of the country is wild and comparatively unsettled, though the area is traversed north and south by the P. G. R. Railroad.

Drilling in Ontario

In the Dawn Field, Lambton County, Ontario, Union Gas Co.'s No. 76, Lot 26, Concession 5, Euphemia Township, is moving in equipment. Union's No. 77 has been located in Lot 30, Concession 11 Sombra Township, just across the township line from the west end of the producing field, and about 7,000 feet west and north of the nearest oil well.

In the west end of the Dawn Field, Union Gas Co. is to treat the wells with acid.

In the Dover Field, Kent County, F. H. Stover & Son's No. 1 Jubenville farm, Lot 13, front concession, Dover East Township, is drilling below 1,650 feet.

In Essex County, Ontario, Bon Jasperson is reported deepening a well near Kingsville. At last reports it was 400 feet in the Trenton with no additional production.

In the Tilbury Field, Kent County, Laddwill Oil Co. is reported down more than 200 feet in S Lot 18 South Middle Road, Tilbury East Township. The test will probably be drilled to the Tilbury gas sand. Geo. Willets of Bothwell is handling the contract.

In Norfolk County, E. P. Rowe's No. 4 on the Mrs. Elwin Stilwell farm near Eden, south of Tillsonburg, is going down to the gas sand. E. P. Rowe's No. 5, Chas. Coyle farm, is drilling on top of the gas sand.

Near the Waterloo-Wentworth County line, Rockton Oil & Gas Syndicate's No. 1, Mrs. Wm. Burgess farm, Galt-Hamilton Highway, has started drilling. A tentative location has been made for No. 2 on the Gordon Cornell farm. J. Harry Smith of Petrolia is president.

TECHNICAL QUESTIONS ANSWERED

By Charles K. Francis, Ph. D., Technical Editor

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible.

Inquiries must be signed but only the given initials will be printed. The source of the question is considered to be confidential.

Questions requiring a discussion of patents, the use of intricate formulas, extended computations, or cost estimates cannot be considered.

When the matter is of general interest the reply will be published within a reasonable time.

Chemicals Used in Petroleum Refining—Calcium Chloride

This short discussion of calcium chloride is one of a series that has been published frequently since March 15, 1934, with particular reference to the chemicals that are important to the petroleum refiner.—Editor.

The important use of calcium chloride in the refining of petroleum is as a brine for conveying low temperatures in the removal of wax from the lubricating stocks. Other limited uses include treatment of petroleum coke to prevent dusting and for sprinkling roads. The special properties that adapt calcium chloride to these uses will be mentioned.

Calcium chloride, $CaCl_2$, is obtained from two sources; the largest quantity being derived as a by-product when making sodium carbonate and a smaller quantity from the evaporation of sea water and natural brines such as obtained from deep wells. A very brief description of these will be given.

An important process for the manufacture of sodium carbonate, known as the Solvay process, starts with common salt and ammonium bicarbonate. The ammonium bicarbonate is converted to ammonium chloride and to recover the ammonia it is the practice to treat the solution with lime water, the reaction being represented by

$$\underset{\text{ammonium chloride}}{2NH_4Cl} + \underset{\text{lime water}}{Ca(OH)_2}$$

$$= \underset{\text{ammonia}}{2NH_3} + \underset{\text{calcium chloride}}{CaCl_2} + \underset{\text{water}}{H_2O}$$

This operation is conducted in a still, where the ammonia passes off as a gas and the calcium chloride remains in the still in the form of a mud to be drawn off. It may be heated to reduce it to the solid form.

Natural calcium chloride is obtained from the liquor formed when oil well brines are evaporated for the extraction of the salt, sodium chloride. This liquid is concentrated and contains in addition to the calcium chloride magnesium chloride. When reduced to the solid the material is suitable for refrigeration brine, for spraying coke to prevent dusting and for treating roads.

Properties: Formula, $CaCl_2$; molecular weight, 110.98; specific gravity, 2.152; melting point, 1,425° F.; solubility in water at 32° F., 59.5 parts in 100, and at 212° F., 154 parts in 100. Many salts absorb water when exposed to the air, this behavior being called deliquescence, and calcium chloride is especially remarkable in this respect. It is so deliquescent that it will finally absorb enough water to completely pass into solution in the water so absorbed; this property explains its value for keeping down dust.

Calcium chloride is well suited for use as a refrigeration brine in that it does not corrode the pipe and is very satisfactory for low temperatures. A brine containing 3.75 pounds of the chloride per gallon will remain liquid to nearly 36° below zero F. While the cost is higher than common salt, a much smaller quantity, at least 25 per cent less, can be used.

Price: The technical grade, containing about 73 per cent, may be obtained in several forms: flaked, granulated, powdered and solid. A liquid containing 40 per cent is usually sold in tank cars. The solid form is shipped in drums of several sizes ranging from 400 to 700 pounds, and also in 100-pound bags. The selling price of the solid is approximately $20 a ton at the source.

Factors Influencing Evaporation Loss of Gasoline in Storage

If it is possible will you please tell us what are the factors that should be considered in connection with the losses by evaporation from bulk storage tanks containing gasoline?—M. C. B.

Losses from storage tanks depend entirely upon a number of factors, the most important of which are the character of the gasoline, atmospheric temperature, wind, exposure, and type of tank.

The more volatile a gasoline the greater will be the loss under a given set of conditions; usually this means that the high gravity low initial boiling point gasolines will lose more than the low gravity high initial boiling point products.

Losses will be higher in the southern states than in the northern, because of the existing higher average atmospheric temperatures. In the southwest and western states where hot winds are common during the summer season of high temperatures, the losses by evaporation are exceptionally high.

Exposure means above and below ground as well as position with respect to some building or natural condition. Below ground storage is desirable whenever it is possible and to the north of a building is better than some other location. Elevated tanks are common, but unless these are protected with a special roof, the position permits circulation of the air and consequently greater losses are experienced than if the tanks were on the ground. Insulation should be applied more than it is, for good insulation will save large quantities of gasoline.

The U. S. Bureau of Mines has reported the results where tanks under several conditions, containing 64.8 A.P.I., 91 initial and 419 endpoint gasoline, were exposed at Kansas City for the summer period, May 29 to October 25. The tanks with insulated housing showed the lowest loss of 1.4 per cent; exposed tank, painted red resulted in a loss of 3.54 per cent. From these results it appears that the evaporation loss of gasoline from gasoline bulk storage tanks may take place throughout the central portion of the United States at the rate of 1 to 4 per cent.

A.S.T.M. (American) and I.P.T. (English) Methods for Gum

Would it be possible for you to give a description of the A.S.T.M. and the English methods for determining gum in gasoline? What are the essential differences in the two methods?—J. P. L.

The A.S.T.M. method provides for 100 c.c. of gasoline to be evaporated, in a beaker set in a well of a bath boiling at 320°-330° F., under a stream of air. Evaporation should be complete in from 8 to 15 minutes, but the beaker is left in place for 30 minutes. The beaker is dried and then weighed.

The Institution of Petroleum Technologists method makes use of two samples: 25 and 50 c.c. that are evaporated in dishes on an ordinary steam bath while a jet of air is directed on the sample. When evaporation is complete the test and tare dishes are dried, cooled, and weighed. If the results indicate less than 5 mgm. per 100 ml., the test should be repeated, using the larger dish and 50 ml. sample.

The features of the two methods are indicated in the table.

A.S.T.M. AND I.P.T. GUM METHODS

	A.S.T.M.	I.P.T.
Evaporated in	Beaker	Dish.
	One size only	Size 1-25 ml. sample.
	100 ml.	Size 2-50 ml. sample.
Heating medium	Closed bath with ethylene glycol	Open steam bath.
Evaporation temp.	160°165.8° C.	+ 100° C.
Air	Flow over whole surface, 1 liter per second	Jet impinging on one point, rate—
		25 ml. sample, equivalent to 1 cm. water.
		50 ml. sample, equivalent to 2 cm. water.
	Preheated to 151.7°-160° C.	Cold
Volume tested	50 ml. only	25 or 50 ml. according to gum content.
Time for evaporation	About 30 mins.	60 mins. or more.

The official designation of the A.S.T.M. method is D381—34T.

Sett Greases Are for Heavy Duty Lubrication

In what respect are sett greases different from other greases? What is the meaning of sett?—H. J. B.

The sett greases are the semisolid lubricants of the cheaper grade used for lubricating heavy machinery, skidways, wagon axles and street railway curves. The name is derived from early Scotch and English, meaning the same as set; that is hardened in a similar sense to the setting of cement.

Klemgard discusses these greases in his book, Lubricating Greases, in part as follows:

The sett greases are mixtures of the calcium soaps of rosin acids and petroleum lubricating oils. They invariably contain an excess of the saponifying agent which in the form of hydrated lime, is insoluble in the grease. Sett greases may be made by mixing cold, or below 150° F. lubricating oil, rosin oil, and a lime mixture known as the sett.

The final mixture will normally solidify in a few minutes, and in some cases in less than a minute, and providing that proper precautions have been exercised in the skeleton of the various stocks, that the ingredients have been mixed in the correct proportions and that the mixing has been thorough, then the resultant product will have a satisfactory consistency and be free from lumps.

In general, sett greases are considered more easily made than cup greases, but due to variations in the rosin oils commercially obtainable, it is sometimes difficult to produce sett greases of constant uniform consistency.

Other additional ingredients that may be present in cold sett rosin greases of particular grades are both flake and powdered graphite, soapstone, gypsum and similar fillers, while occasionally other fats or fatty acids may be added, in which case there is formed the lime soaps of both the fatty and the rosin oils. Some manufacturers use small quantities of caustic soda in the manufacture of their sett greases, resulting in products which are of particular value where a grease is required to adhere well to wet metallic surfaces.

Klemgard gives the formula for summer grade curve grease as:

	Gallons
Prepared oil (rosin oil and lub oil)	3.0
Asphalt base fuel oil 16° A.P.I.	3.5
Kidney rosin oil	1.0
Sett	5.0

The formula of the finished grease is:

	Per cent by weight
Fuel oil	78.13
Kidney rosin oil	8.30
Calcium oxide	5.43
Water	8.14

The sett, 50 pounds, is prepared according to the following:

LIGHT SETT

Water	6 lbs., 4 oz.
Kidney rosin oil	10 oz.
Asphalt base, 180 vis. @ 100° F.	32 lbs., 10 oz.
Pale oil	7 lbs.
Hydrated lime powdered	3 lbs., 14.75 oz.

The pale oil and rosin oil are mixed and then warmed to 120°-130° F. The water is poured on the lime, in a separate container, then when well mixed added to the rosin oil mixture and stirred at 120° F. until thickening starts; then add the remainder of the oil. Continue stirring until firm.

PERSONAL PARAGRAPHS

U. G. TUTTLE, sales manager of the Empire Oil & Refining Company, is home from a vacation in Colorado.

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H. C. ADELHEIM, secretary and treasurer of the Leland Equipment Company, is back in Tulsa after a vacation in the Missouri Ozarks.

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R. D. PAWLESS, of the scouting and land department of Tide Water Oil Company, with his family, has gone to Houston, Tex., on a vacation.

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HOWARD E. FELT, secretary of the Warren Petroleum Company, has returned to Tulsa after spending a month at Lake Chautauqua, in New York.

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H. F. STOVER, purchasing agent of the Gaso Pump & Burner Company, with his family, is spending a vacation on Roaring River, in Southwest Missouri.

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JOS. A. LA FORTUNE, vice president of the Warren Petroleum Company, left August 1 with his family to spend a month at Lake Naximkukee, near Culver, Ind.

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A. W. ROGERS has been appointed chairman of Siparia Trinidad Oilfields, Ltd., in place of F. R. PHILLIPS, who resigned but retains his seat on the board.

• • •

GEORGE S. BAYS, who recently became research and advisory engineer of the Stanolind Oil & Gas Company, is not to move his office to Dallas, Tex. He is to retain his headquarters at the general office of the Stanolind company in Tulsa.

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HEATH M. ROBINSON, geologist has moved his office to the Continental Building, Dallas, Tex.

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DICK GORDON, of Tulsa, is spending a vacation with his mohter at El Dorado Springs, Mo.

• • •

GRANT CORBY, associated with the Western Geophysical Company, who has been in Honolulu for the past month has returned to Los Angeles, Calif.

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F. L. (SCOTTY) GILLAM, of the purchasing department of the Mid-Continent Petroleum Corporation, is making a motor trip vacation through Arkansas.

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E. C. (ED) KOPP, district manager for the Smith Separator Company, is in Springfield, Mo., visiting his mother who is in a hospital, in that city, following an accident.

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MARK R. HOPKINS, chief draftsman for Tide Water Oil Company, at Houston, Tex., has left for his home in Iowa, accompanied by his family, where he will spend his vacation.

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M. J. CZARNIECKI has been elected vice president in charge of sales of the A. M. Byers Company, succeeding H. W. RINEARSON, resigned. Mr. Czarniecki was formerly general manager of sales.

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JOE LEONARD, former scout for Texas Seaboard Company in East Texas, recently accepted a position with the Tide Water Oil Company as scout and land man in West Texas. His headquarters will be at Midland, Tex.

D. J. SNAKARD, scout in Kansas for the Texas Company, is on vacation.

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J. C. AXELSON, president of the Axelson Manufacturing Company, has returned from a trip to European oil fields.

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VERNON F. TAYLOR, of Indiana, Pa., president of the Peerless Oil & Gas Company, was a business visitor in the Mid-Continent recently.

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J. C. MILLER, geologist with the U. S. Geological Survey, has arrived in Lovell, Wyo., to join DR. C. E. DOBBIN in his survey of the Garland oil field.

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A. F. VAN EVERDINGER, chief valuation engineer for the Royal Dutch-Shell, has sailed from New York to headquarters at The Hague, Holland.

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JOHN SHEERIN, of Amarillo, Tex., vice president and general manager of the Shamrock Oil & Gas Company, was in Tulsa for several days on business last week.

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CHARLES KLEIN, treasurer of the Mid-Continent Petroleum Corporation, with MRS. KLEIN, has left for a combined business and pleasure trip to London, England.

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W .L. CONNELLY, chairman of the board, of the Sinclair Prairie Oil Company, returned to Wyoming last week from a trip to California. He is inspecting company properties in the State.

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CHARLES PRATER, production engineer for the Gypsy Oil Company, is in Venezuela on business for the Gulf Production Company. He will return to the United States around the first of the year.

J. W. SHIELDS, purchasing agent for the Pure Oil Company, is on a two weeks' vacation at Estes Park, Colo., accompanied by his family.

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WINSTON P. HENRY, independent oil operator of Houston, Tex., and formerly of Tulsa, is on a vacation in Connecticut.

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DR. WILLARD F. BAILEY, geologist and former professor in the University of Missouri, has joined the Midland, Tex., staff of the Texas Company geologists.

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W. H. HEYDRICK, map man of Wichita Falls, Tex., and a party of North Texas and Southwest Oklahoma oil men, are on a hunting trip in Colorado and Utah.

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R. C. ROGERS, Enid, Okla., oil producer, stopped in Tulsa for a brief visit before going to New Orleans, La., where he was to take a tour of the West Indies and Central America.

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HARVE LOOMIS, consulting geologist, and SPRIG MILLER, former Texas land man with the Tide Water Oil Company, are now independent operators at Abilene, in West Central Texas.

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GEORGE MANAHAN, of the Manahan Drilling Company, and family, left Tulsa, Saturday for a vacation in Wisconsin.

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W. C. JOSEY, president of the Rancho Oil Company and Gem Oil Company, Fort Worth, Tex., is in Chicago, and will visit points in Canada and the Rocky Mountains before returning early in September.

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ROBERT L. KINKAID, geologist, is spending a vacation on the Pacific Coast.

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J. B. FRENCH, of Oklahoma City, Okla., and his family, are spending a few weeks in Los Angeles, Calif.

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GEORGE W. STRAKE, independent operator and discoverer of the Conroe Field, has spent the past three weeks in Colorado.

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MISS AMBER DAVIS, secretary of E. E. KIRKPATRICK, is spending her vacation in California. She is expected back in Tulsa August 15.

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BERT LIGON, sales manager for the Wilson Manufacturing Company, Wichita Falls, Tex., has returned from a business trip to Houston, Tex.

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L. W. STORM, geologist for the Sun Oil Company at Beaumont, Tex., has returned from a trip to Philadelphia, Pa., on one of the company's tankers.

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JERRY GRAGWIRE, of the International Petroleum Company staff in the Peruvian fields, is at Lake Huron Beach on a three months' furlough.

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DEL RAMSEY and DAVID KIRK, of Tulsa, sailed on July 21 with a seismograph party of the Gulf Oil Company for a two-year stay in Venezuela.

• • •

A. S. HOPKINS, former president of the Standard Oil Company of Kansas, is the new mayor of Neodesha, Kans. He was appointed to succeed J. W. BOGUE, mayor for 19 years, who died July 16.

DO YOU REMEMBER?

From The Oil and Gas Journal Files

25 Years Ago

August 9, 1909

Bradford, Pa., is celebrating Old Home Week, August 8 to 14, which means the return of a host of oil men now scattered in many fields.

The Gulf Pipe Line Co. and J. M. Guffey Petroleum Co. have completed plans for the three-story office building in the companies' headquarters city, Beaumont, Tex.

John Donaghue, well known Humble, Tex., operator, was killed at a Colorado drilling well when the temper screw jumped off the beam and struck him on the head.

20 Years Ago

August 13, 1914

The shutting off of transatlantic commerce owing to the European war is having a bad effect on the petroleum export situation, as it means a loss of markets and a backing up of oil and oil products in the United States. For the first time in oil history American producers are placed in a position where they have to go out and find markets for their crude.

A total of three hundred seventy-four 55 000-bbl. storage tanks have been built, are building, or the material is on the way for erection, in the Cushing Field in Oklahoma. The Prairie owns 174 and White and Sinclair 78 tanks, these being the largest owners.

Mrs. Herbert R. Straight, of Bartlesville, Okla., is in Christiana, Norway, trying to communicate with or reach her children who were placed in a private school near Berlin before the war. Mrs. Straight with a party of friends were touring Norway when war was declared.

10 Years Ago

August 7, 1924

It develops that the first Wilcox sand oil well drilled in Osage County, Oklahoma, was located in NE cor. SW Section 8-20-12, on a Barnsdall Oil Co. lease in 1914. It was called the "second break in the lime."

Jess Scarborough, head of the Cosden Oil & Gas Co.'s land department, and Miss Anna Bell Williams, were married recently in Oklahoma City, Okla.

Twenty representative oil stocks averaged $49.75 per share on August 4. There has been little change since April 1. The highest on the list is Standard Oil Co. of Ohio, at $297 per share (par $100).

F. C. NICKEL, president of the Midland Gasoline Company, Houston, Tex., has been in Tulsa on business for several days.

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E. O. MARKHAM, assistant chief geologist of the Carter Oil Company, has left for his old home in northern Missouri, where he expects to spend two weeks.

• • •

E. J. SOUR, of the purchasing department of the Skelly Oil Company, is spending a vacation with relatives and friends in Shreveport and other points in Louisiana.

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WILLIAM H. THOMPSON, secretary-treasurer of the Ohio Gas and Oil Men's Association, has resigned because of ill health. He is suceeded by FRANK B. MAULLAR, of Columbus.

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MRS. MARY FAIN, secretary to J. P. STEELE, district manager of South Chester Tube Company, Fort Worth, Tex., has returned from a vacation trip to points in Oregon and Washington.

• • •

"SPRIG" MILLER, formerly land man for the Tidal Oil Company at Fort Worth, Tex., who has spent the past two years in the East, has returned to Fort Worth to re-enter the oil business as an independent.

• • •

C. C. POPE, land man and scout for the Sun Oil Company, San Angelo, in the West Texas district, is spending his vacation in Mexico City, Mexico. Mr. Pope recently spent considerable time in the Dallas, Tex., office of the company, substituting for JOHN LANGSTON, chief scout, who was laid up for awhile by the return of an old ailment.

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H. B. FELL, executive vice president of the Independent Petroleum Association of America, will visit Central Michigan oil fields next week.

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F. A. KIRKLAND, purchasing agent of Kewanee Oil & Gas Company, with his family, has started on a motor vacation trip to New Mexico and Colorado.

• • •

H. E. SCHAEFER, general superintendent of the Pure Oil Company, and family have returned from Colorado. They divided time between Denver and LaForge, where MRS. SCHAEFER'S mother lives.

• • •

GEORGE PIRTLE, of the firm of Hudnall & Pirtle, consulting geologists, Tyler, Tex., and MRS. PIRTLE, are in Mount Pleasant, Mich., combining a business and pleasure trip, staying with MR. and MRS. WALTER L. McCLANAHAN at their lodge near Grayling, north of the Mount Pleasant area.

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THOMAS S. KNAPP, consulting geologist in Mount Pleasant, Mich., for the past year, has been added to the office staff of the Oil and Gas Division of the Michigan Department of Conservation in Mount Pleasant. Mr. Knapp specialized in surveying and economic geology at the University of Michigan.

• • •

C. P. BUTCHER, geologist, is zone manager of the new offices Tide Water Oil Company opened at Midland, Tex. R. E. GILE, geologist, and JOE LEONARD, scout, are other members of the zone office staff. The Midland office will have charge of Permian Basin operations in West Texas and New Mexico.

• • •

RALPH J. REED, a director of the American Society of Civil Engineers and for several years chief of the engineering department of the Union Oil Company, has just about completed the reconstruction of the J. W. Robinson Building in Los Angeles which was subjected to such severe strains during the earthquate in March last year that he was obliged to remove the entire outer finish and replace it.

Young in Years, Old in Experience

Although only 32 years old, H. W. Klein, general superintendent of production for Stanolind Oil & Gas Company, has compressed much and varied experience into his service in the oil industry and he holds a position weighted with responsibility.

H. W. KLEIN

Born in Jackson, Wis., in 1902, Mr. Klein attended high school in West Bend, that State, and then entered the University of Wisconsin, where he took the course in commerce, laying a foundation for subsequent work. Soon after his graduation he got a job as an accountant in the office of the Midwest Refining Company in Casper, Wyo. Following this office experience Mr. Klein was sent to the company's property in Iles Dome, Colo., where he had charge of the office for a while and then went out on the lease and worked as a roustabout, pumper and tooldresser.

From Iles Dome Mr. Klein was transferred to the general office of the Dixie Oil Company, Inc., in Shreveport, La. The Dixie, like the Midwest, was a subsidiary of the Standard Oil Company (Indiana). Here he soon became assistant to F. O. Prior, then general superintendent and chief engineer of the Dixie.

When certain subsidiaries of the Standard of Indiana were merged into the Stanolind Oil & Gas Company in 1930, with Mr. Prior as president, Mr. Klein was installed in the position which he now holds.

Mr. Klein, who has resided in Tulsa since 1930, is unmarried. He takes a keen interest in athletic sports. At college he played baseball and football. Now he contents himself with golf, handball, fishing and hunting, when he finds opportunity for recreation.

CECIL HAGAN, of the South Coast Oil Company, Houston, Tex., has returned from a 10-day motor trip to New York.

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H. R. LELAND, of the Leland Equipment Company, has gone to Santa Fe, N. Mex., to spend a two weeks' vacation. He was accompanied by MRS. LELAND and son, JIMMIE.

• • •

P. R. JOHNSON, of the David C. Reid Company, New York oil exporter and ship broker, stopped off in Tulsa for two days last week, en route to Houston, Tex., and Los Angeles, Calif.

• • •

J. B. H. HENDERSON, former sales manager of the Wyatt Metal & Boiler Works of Houston, Tex., has resigned to become president of the Hegralle Corporation, having production in Wilbarger County, North Texas.

• • •

GEORGE W. BRINKLEY has been transferred to the Ardmore office of the Oklahoma Natural Gas Corporation. He had been manager of the office at El Reno, Okla., and was assistant office manager in Tulsa in 1931.

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JAMES M. FLAHERTY has been transferred from the St. Louis, Mo., office to Tulsa, as office manager and assistant treasurer of the Shell Petroleum Corporation. He succeeds F. C. EMBSHOFF who is being transferred to the Houston, Tex., office.

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CARL HOCHENAUER, district sales manager for Babcock & Wilcox Tube Company, has gone to Colorado Springs, Colo., to attend a meeting of the American Petroleum Equipment Suppliers Association, August 6, 7 and 8. He will return to Tulsa about August 15.

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WILLIAM J. KEMNITZER, petroleum technologist and coauthor with RALPH A. ARNOLD of "Petroleum in the United States and Possessions," is now at the California Institute of Technology and starting to write a book, "Economics of Petroleum."

LARRY A. OGDEN, chief engineer for the Pure Oil Company, flew to California last week to join MRS. OGDEN for a vacation of about 10 days.

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BART MYERS, superintendent, Imperial Oil Company, Ltd., in Venezuela, is making a tour of the Mid-Continent fields, and is at present in the Gulf Coast area.

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C. C. CRIDER, Taubman Supply Company, has returned from a business trip to Kansas and will leave in a few days for California on a vacation trip.

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J. M. ALLEN, supervisor of the Mid-Continent district of the U. S. Geological Survey, has returned to the Tulsa office after a 10-day inspection and field trip in Texas and New Mexico.

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O. D. WILLIAMS, field superintendent of Helmerich & Payne Drilling Company, is in St. Lukes Hospital at Kansas City, Mo., receiving treatment for his right leg, injured in an automobile accident near Oklahoma City, Okla.

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W. T. HENDERSON has been named store man for the Happy Belting Company at Odessa, Tex. T. L. FULLER is representative for the company in the West Texas and southeastern New Mexico district, with headquarters at Odessa.

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V. C. FULLER, purchasing agent, Gypsy Oil Company, has been enjoying an extensive vacation with his family, including Pueblo, Colo., Salt Lake City, Yellowstone Park, Casper and Cheyenne, Wyo., Denver and Colorado Springs, Colo.

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SECRETARY OF THE INTERIOR H. L. ICKES, oil administrator, spent several days in Yosemite Park during the latter part of July.

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JOHN W. SHIELDS, purchasing agent of the southwestern division of the Pure Oil Company, has started for Estes Park, Colo., for a fortnight's vacation.

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T. J. FLANAGAN, president of the Gaso Pump & Burner Manufacturing Company, left for Los Angles, Calif., last week and expects to remain on the Pacific Coast until September 1.

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MRS. NOLAND KERR has resigned her position in the land department of the Indian Territory Illuminating Oil Company at Bartlesville, Okla., to accept a position with the Federal Land Bank at Wichita, Kans.

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E. C. ARNOLD, of the Oklahoma City, Okla., district office of the U. S. Geological Survey, is on his two weeks' vacation. He planned to take in the World's Fair at Chicago and to tour the Middle West.

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VALENTINE M. KIRK, discoverer of the Frannie oil field, was in Casper, Wyo., last week en route to Frannie and Cody, to inspect his operations in the Frannie Field and Oregon Basin. He has been in Colorado Springs, Colo., for the past three months.

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FRANK B. FIRMIN, assistant treasurer of the Ohio Oil Company, was in Casper, Wyo., for several days on company business. He was accompanied by MRS. FIRMIN, daughter, EDITH, and son, JOHN. They left by automobile for their home in Findlay, Ohio.

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JOHN GALLEY, subsurface geologist of the Shell Petroleum Corporation, Tulsa, has been transferred to the Panhandle district office at Amarillo, Tex., succeeding C. W. SANDERS, sent to the Houston, Tex., office. SHERWOOD BUCKSTAFF is taking Mr. Galley's place in Tulsa.

FIELD PROBLEMS FROM READERS

Edited by Thomas F. Smiley

This department is conducted in order that men connected with the drilling, producing and transporting branches of the petroleum industry may obtain aid in solving problems that confront them in their work. Readers are invited to send questions freely. These questions will be placed in the hands of persons capable of answering them authoritatively, and the answers, based on the best available information, will be published.

Each question should give as much detail as possible, especially if it involves depth of sands, types of sands and operations on adjoining or nearby properties. The source of questions will be considered confidential, and only the initials of the sender will be published. Questions involving patented processes, intricate formulas or estimates of cost cannot be answered. If an immediate answer is important, one will be given by mail when the writer requests it.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or improved old ones.

Lubricant for Differential Gears Under Heavy Load Is Problem

In a rudimentary fashion I have been making some experiments in an effort to hit upon the most effectual lubricant to use on differential gears operating under heavy load. I am not making much progress. Can you tell me whether any organized work along this line has been done, what it has consisted of and what results have been achieved?—E. L. N.

The Bureau of Standards has been doing experimental work with a view particularly of solving problems encountered in the use of extreme-pressure lubricants in automotive equipment. These problems were concerned primarily with the requirements which these lubricants should meet to perform efficiently in the gears of differentials operating under high tooth pressure. First the bureau collected all the information available as the basis for a detailed program. Oscar C. Bridgeman, of the bureau staff, says that analysis of data thus obtained indicated:

1. The properties of these lubricants which are significant from the standpoint of performance in service, and for which tests are desirable.
2. The great diversity of test methods for the various properties and the contradictory results obtained by different test methods.
3. The almost entire lack of information correlating laboratory test data with service results.

On the basis of this analysis, a general problem was outlined enumerating the various properties for which test methods should be developed, and a detailed program for immediate consideration on load-carrying capacity which was considered to be the most important property.

The available information indicates that the following five properties of an extreme-pressure lubricant are significant from the standpoint of use in differential gears, and probably in any type of gearing:

(a) Load-carrying capacity, which represents the maximum load which can be applied under any given conditions without seizure of the metal surfaces.

(b) Coefficient of friction, which controls the amount of heat generated in the gear teeth.

(c) Stability, which involves maintenance of high load-carrying capacity, and freedom from thickening or from sludging during use.

(d) Tendency to cause wear, which includes both the effect of inherently abrasive material in the lubricant evidenced under light load, and the effect of the extreme-pressure compound in increasing or decreasing wear under heavy load conditions.

(e) Corrosiveness, which involves not merely darkening of the metal surface but actual damage to the metal by chemical reaction.

A machine has been developed by the Bureau of Standards for measuring load-carrying capacity which, as far as available information goes, rates the lubricants in the order of their service performance.

A research type of machine, similar to the experimental one developed at the bureau, has been designed.

Preliminary information has been obtained on coefficient of friction, wear and stability of load-carrying capacity which indicates that there are large differences between extreme-pressure lubricants in these respects.

In order to obtain a complete solution of the problem, there still remains:

Co-operative work on the new lubricant tester with a wider variety of lubricants and the standardization of a routine test apparatus and method for the measurement of load-carrying capacity.

Completion of the investigation of coefficient of friction, abrasiveness under light load, and stability of load-carrying capacity and standardization of significant test methods for these properties.

Investigation of wear under heavy load, stability of the lubricant as regards thickening, and corrosiveness, leading towards the development of test methods.

Repairing Large Corroded Areas of Underground Pipe Lines

You told in your issue of July 5, 1934, how repairs are made of pits in an old underground pipe line, but in some cases a joint of pipe will be almost peppered with these pits, and I don't believe the method of repairing them you described would be satisfactory. What is the best pipe line practice where there is a large area of corrosion in a length of pipe?—F. E. R.

It is true that the repair method to which you refer would not be satisfactory where the corroded area is large. William G. Heltzel, general superintendent of the Stanolind Pipe Line Co., provides the following information in reply to your question:

Where an inspection of the pipe reveals an area which is deeply pitted a patch large enough to cover it is cut from a piece of pipe of the same diameter. The patch is pressed with hydraulic jacks so that the inside curvature fits the outside curvature of the line to be repaired. The patch is tacked on and then electrically welded around all edges to the line. Some pipe line companies put on three or four patches on a single joint of pipe. The bottom of the pipe, where it rests firmly against the soil, holds the moisture and makes a good contact, and it is badly pitted sometimes while the upper half of the pipe is in good condition.

Rather than replace the pipe, which would require a long shutdown to take care of the drainage, some companies have followed the practice of "half-soling" the joint. This procedure is similar to the use of the patch except in this case the patch becomes a half-sole, since it is cut almost large enough to cover the lower half of the pipe over the whole or part of the length of the pipe. The edges of the half-sole are electrically welded to the pipe in the same fashion as the patch.

If the corrosion is limited to only the bottom of the pipe a "slab," which is similar to a half-sole except it does not cover as great an area of the pipe, is electrically welded to the pipe.

An inspection of the pipe in dry or shallow creeks, water courses and swamps often reveals that the pipe is in bad condition and should be replaced with good pipe. Operating conditions may not permit the necessary shutdown time to drain the line. In such cases many companies have resorted to the use of a large casing over the pipe. A straight casing can be used sometimes but often in the case of creek crossings and water courses it is necessary to make use of a mitred casing to fit over the sags. The casing of the line is done by splitting a larger piece of pipe into halves, swaging it down at the ends and fitting it over the smaller line. The length of the casing is electrically welded along the longitudinal seams and the girth joint is welded to the pipe. This procedure, except that the casing is usually straight, is also used sometimes when old lines must be cased across newly constructed roads, especially if the oil drainage is large.

Why Was It Called That?

FIRING LINE

The modern pipe line is welded with acetylene torch or electric arc and the crew that joins individual joints of pipe into longer sections along the right of way is referred to as the "firing line" gang. The term evidently was derived from certain similarities between the conditions surrounding this gang of welders and the men behind the trenches at the battle front. Immediately in front of the welders is an open ditch with an earth embankment, and the popping as the acetylene torches are ignited with the spark remind one of infantrymen in action.

Plan of Running Salt Water Back Into Formation Experimental

Is it a fact that the salt water taken in large quantities from oil wells in some areas is run back into the formation? I came across a statement recently that indicated this method of getting rid of the brine was at least under consideration. The thing doesn't look like good sense to me.—E. T. T.

It is not astonishing that a proposition to put oil field brines back into the underground formation excites skepticism at first, but it is a fact that this method of disposing of salt water is considered seriously by petroleum engineers. The procedure has been used so little that it must be regarded as in an experimental stage only. Ernest Boyce, chief engineer of the Kansas State Board of Health, has made a study of salt water disposal and this department is indebted to him for the following reply to your question:

"The removal of oil and salt water from producing formations must of necessity leave the rock openings, formerly filled by the pumped oil and water, either filled with gas or with water that has moved into the space under hydrostatic head. While in some geological formations there is evidence that the removal of petroleum results in a compacting of the producing formation due to the pressure of overlying formations, there is no known evidence that the oil producing formations of Kansas are so compacted. Unless these formations are reduced in volume, it follows that salt water might be returned to the oil producing sands for it is obvious that the salt water is of less volume than the salt water and oil pumped from the well. [The return of the brine to underground formations would be effected by means of holes drilled for the purpose or wells which already have gone to water. In either case the hole would have to be downdip on the structure from the producing well.]

"Solar evaporation from ponds might be useful in reducing the volume and increasing the concentration of brines before their return to salt water formations. If we accept the theory that the brine underlying the oil rises in the structure as the oil and gas are removed, it follows that at some point an equal volume of water might be added to replace the brine that has moved into the producing formation without disturbing its hydrostatic balance.

"When the gas pressure of a new field has been exhausted, the water and oil will seek a static level in the well which, when corrected for density difference, is the top of the ground water table connecting with the bottom water holding the oil perched inversely beneath some impervious formation.

"Oil operators have regarded the return of salt water to underground formations with justified concern due to the danger of adding excessive volumes of water to the producing formation and causing the migration of the oil, thus disturbing the natural distribution of oil between the wells and competing companies and different lease owners. The cause for concern would be greatest if each producing company attempted to use underground disposal individually on their own leases.

"While some attempts to return salt water to underground formations have not been successful, there is reason to believe that the most of the difficulties encountered have a workable solution."

NATURAL GAS DEVELOPMENTS

Natural Gas Hearings by Trade Commission

WASHINGTON, D. C., Aug. 6.—The Federal Trade Commission's public utility hearing announced for Monday, August 6, at which a report was to have been made on natural gas production, distribution and interstate movement in the United States, has been postponed until Tuesday, August 14. The hearing will take place at the Commission's offices at 2001 Constitution Avenue, N. W., beginning at 9 a. m.

On Monday, August 13, at the same place, a hearing will be held on the Tri-Utilities Corp. of New York City and its subsidiary, the People's Light & Power Corp.

Oklahoma City Considers Alternative Gas Plans

Oklahoma City residents will vote October 2 on a plan to either buy the Oklahoma Natural Gas Co. distribution system there or construct a new system.

The council voted 7 to 1 to submit the $4,000,000 municipal proposal, probably in the form of a bond issue, to the electorate.

Plans were under way by R. W. Hendee, Oklahoma Natural president, to present a franchise proposal to the council soon, since the firm's 25-year franchise expires October 31. He said he probably would ask for a franchise election in November, some time after the general election set for November 6.

Before the councilmen passed the motion to submit the proposal to the people for a vote, a proposal to hold an election allowing the electorate to choose between municipal ownership and the Oklahoma Natural franchise was withdrawn due to opposition of company officials.

The vote of the council climaxed a 3-year fight led by Councilman J. E. Taylor. The company had declined to offer a rate cut from the present charge of 45 cents per 1,000 feet.

Details of the election will be worked out soon, and it is believed that since a bond issue probably will be necessary, only property owners will be allowed to vote on the question.

Oklahoma Natural Taking Over Muskogee Natural

By August 15 the distribution lines and all consumers of the Muskogee Natural Gas Co. will have been taken over by the Oklahoma Natural Gas Corp. as a result of the permission granted by the State Corporation Commission for discontinuance of service by the Muskogee Natural.

This announcement was made by P. V. Root, manager of the Oklahoma Natural in Muskogee, after his return from Oklahoma City where he attended the hearing before the Corporation Commission.

Affairs of the Muskogee Natural, organized five years ago by Mrs. Elizabeth Mills of Muskogee, Frank DeMayo of Kansas City and others, have been conducted by the Oklahoma Natural since January 1.

The Muskogee Natural first was sold to the Southwestern Utilities Co., whose bonds were guaranteed by the Oklahoma Natural in the sum of about $2,500,000. Through this arrangement the Oklahoma Natural eventually was compelled to take over management of the company and assume an indebtedness of $250,000 for gas furnished, Mr. Root said.

The Muskogee Natural had about 3 miles of distribution lines in the city and at the first of the year was serving 86 consumers.

Suggested Method for Determination of Losses on Gas Transmission Lines

By EARL KIGHTLINGER
Arkansas-Louisiana Pipe Line Co.*

Unaccounted for gas has until recent years been an expense taken for granted along with the operation of any pipe line system but, due to the increase in price of produced gas and the lengthening of the lines to serve a community from a field in another state or across several states, the problem of lost gas per mile of line is now one the solution of which has become imperative. As long as the pipe line systems were comparatively short, a high leakage rate per mile of line did not necessarily mean the loss of a large percentage of the purchased gas but, with the present length of lines a high leakage rate could not be countenanced.

From the accounting department's overall statement of gas purchased and sold may be found a total figure of gas unaccounted-for but, in most cases, this cannot be taken as the actual leakage on a pipe line system. In the summer when replacement work is being done and also when construction work is going on, a check must be kept on gas lost in emptying and blowing lines. Quite often this figure will be small but at times it would be of such importance that the failure to consider it might give figures so erroneous as to cause quite a lot of worry. The flat rate and free gas problems are being rapidly, if not entirely, eliminated now and so are very easy to handle in a report.

Having made sure of eliminating all figures that do not actually represent unaccounted-for gas, it must be found on what part of the system the leakage occurs before being ready to look for any trouble in a physical sense. This segregation is made possible by meter stations placed at various intersections of lines and often in the center of long lines dividing the entire pipe line system into a group of smaller and workable systems so the excess leakage, if any, may be traced to a unit small enough to be thoroughly inspected at no great cost. This report, I believe it will be agreed, can best be made from the actual gas accounting department statements of gas passing through each meter and compiled by one who is thoroughly familiar with the layout and operation of the entire system and knows on what certain check meter system each meter is located.

Monthly Reports

These reports are probably more profitable when made monthly than daily as variations in pressures will cause volume variations that might seem to be excess unaccounted-for gas. Even in monthly reports, this same tendency occurs making it profitable to also carry figures on a 12-month ending basis to secure more stable figures on the operation of any section of line. Should the gas dispatchers at any time report undue drop in pressure over any section of line, it would be easy to check the unaccounted-for gas figures for that particular section on a daily basis.

From the leakage or discrepancy report, it is possible to plot curves showing the loss per mile of 3-inch equivalent line on both a monthly and yearly basis. These curves will give a very good criterion as to whether the leakage tendency is up or down. If, from the leakage curves, it is found that any particular system or systems show an undue leakage, it would be well to consider their relation with the systems into which they are connected. At times the check meters measuring from one system to another may be in error causing the figures to show an undue leakage on one system while on the allied systems there is either a gain or a very small loss. This occurs at times where the check meters may not be operated at the same efficiency as the purchase and sales meter due to the fact they are often considered useful but not of extreme importance and also, operating conditions often are such that the loads through the check meters are such variables the correct size plates cannot be kept in the meters and often a large plate must be kept in a meter to take care of a possible load much in excess of the average. In some cases, it is possible to install an orifice flange in the by-pass around the meter run and thus make a by-pass meter capable of taking care of the small loads or it may be possible to install a patented flange capable of holding two or three different size orifice plates which might be changed with the variable load. Either of these make a very flexible unit for operation.

Compressibility might also cause some erroneous figures on check meter systems if a compressor station was so located as to cause a large difference in pressure at the points of largest volume input and takeout. This same condition might be found if a gas field input pressure is extremely high and the takeout of that system is low, as generally occurs at town border stations.

Temperature Corrections

Another problem to be considered is that of temperature and temperature corrections. On most of the larger consumers and some town border stations, temperature corrections are now being made but on the wells delivering gas into the lines and on the many small consumers there is at present almost no consideration given to temperature. In the deliveries from deep wells, the temperature of the gas increases with the increased pull causing, during the winter's heavy load, a volume of gas shown on the meters in excess of that actually received when based on a 60° F. temperature base while, in the summer with a low load, the amount of gas as shown by the meter is less than it would be if corrected to 60° F. At the point of sales where no temperature corrections are made the reverse is true, in that the heavy pull comes at low temperatures and the small load at the high temperature thus causing, in the winter, an unaccounted-for gas figure higher than the actual leakage while, in the summer, the actual leakage is more than that shown.

The effect of gravity upon the volume of gas in practically all cases is not to be considered in the unaccounted-for gas figure as corrections are made upon the basis as agreed in contracts which means in most cases semimonthly corrections, although some companies are installing recording gravitometers.

Having eliminated all of the possibilities of discrepancies other than actual leakage, it is advisable to now check further and work the actual leakage, to as near as possible a yearly rate of leakage per 3-inch equivalent line at 100 pounds pressure, for comparison with that of other lines. Some authorities say that a yearly rate of actual leakage of 200,000 cubic feet per mile of 3-inch equivalent line on transmission lines is permissible. Most companies have line walkers covering their entire systems of lines periodically and a special inspector who covers the entire system picking up any leaks that might be overlooked by the men who have become accustomed to certain conditions and miss small changes in those conditions that occur gradually. It would be possible to send the line walker over the check meter system for a very close check on all connections, drips or other probable points for leakage. Being unable to find the trouble in this manner, it is sometimes possible to take a line out of service for a few hours for a shut-in pressure drop test, but often this will not be the case. If the line can be taken out of service, it must be cut entirely off from any possible input or takeout by blind plates, bullplugs or lubricated stop-cocks. On lines equipped with lubricated stops, it is possible to make a test in a much shorter time than would be possible where it is necessary to install blind plates or bullplugged joints. Care must be taken to assure these valves being properly lubricated for a perfect shutoff. Often it is possible to pack the city plant lines and lines of small consumers to make testing possible during the hours of the smallest consumption. This, of course, would be impossible when large towns or industrial consumers are being fed from the particular system. When the shut-in test is impracticable, there is a possibility of a metering-in test which, although not as satisfactory as the shut-in test, may within a period of a few days give a fair check if the leakage is extremely large. Considering neither of these tests practical, it is further possible to resort to the bar-test. In this test, bar holes are punched along the line at intervals of several feet and a man with a torch follows behind to test each of the holes. This, of course, is practical only in the open where any possible fire would not cause dangerous results.

In most cases, it is practical to make shut-in pressure drop tests on all new lines before they are considered completed. On a welded or coupled line, it is most often possible to get the yearly leakage rate as low as 25,000 cubic feet per mile of 3-inch equivalent line at 100 pounds and on screw lines about 100,000 cubic feet per mile of 3-inch equivalent.

By the making of shut-in tests of all newly constructed lines, those being replaced and on other lines, whenever possible to get them out of service for a period of time, it is possible to keep the leakage within reasonable bounds.

*Before Gas Measurement Short Course, Norman, Okla.

EASTLAND AND CISCO RATES

FORT WORTH, Tex., Aug. 6.—The Lone Star Gas Co. has agreed to cut the price of gas to Eastland consumers to 50 cents per thousand feet, a 17½ cents per thousand reduction. Hickok Oil Corp. has a franchise in the town of Cisco and will serve it with gas and may also obtain a franchise in Eastland, although the reduction by the Lone Star may preclude that contemplated move by the other company.

TABER GAS STRIKE

TABER, Alberta, Aug. 4.—Early in July a test drilled for artesian water on the Frank Bonetti farm here by J. W. Fortune of Bow Island encountered an artesian flow of 40 bbls. an hour with a heavy gas flow. The water was struck at 745 feet and the gas a few feet lower. The gas will be utilized in the farm buildings. Similar production was encountered earlier in the year on the Albert Green farm, 3 miles west of Taber.

MARKET RECORD OF OIL SECURITIES

Active Oil Stocks Listed on New York Stock Exchange

Compiled by Carl H. Pforzheimer Co., 25 Broad Street, New York City. Members New York Stock Exchange and New York Curb Exchange

1934 High	1934 Low	Week ended Aug. 4 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	1933 High	1933 Low	1932 High	1932 Low	1931 High	1931 Low
55⅝	41½	4.500	45	42½	43½	Amerada Corp.	774.875	N.P.	50cQ	7-31-34	47⅝	18½	22¾	12	23	11¼
35¼	21½	9,400	24½	22⅛	23⅝	Atlantic Refining	2,065.234	$25	25cQ	6-15-34	32½	12⅝	21⅞	8⅝	23⅝	8⅝
10	6	10,200	7	6¼	6⅝	Barnsdall Corp.	2,248.795	$5	....	5-11-31	11	3	7	3⅜	14½	4
19¼	7¾	34,300	9¾	8¾	9	Columbia Gas & Elec.	11,610,036	N.P.	12½cQ†	5-15-34	28½	9	21	4¼	45⅝	11⅝
14¼	7¼	28,200	8¾	8	8⅜	Consolidated Oil Corp.	14,218,835	N.P.	28c	4- 7-34	15⅝	5	9	4	15⅞	4¼
22¾	15⅜	19,600	18¼	16⅝	17⅛	Continental Oil of Delaware	4,738,593	$5	25c	4-30-34	19⅝	4⅞	9⅝	3⅝	12	5
22¼	12	3,600	14⅞	13	13¾	General Asphalt	387.149	$10	....	6-15-32	27	4⅝	15½	4⅜	47	9⅜
5⅜	2½	1,600	3¼	3	3	Houston Oil (new)	1,098.618	$25	....	10-17-30	7⅜	1⅞	5⅜	1⅛	14⅛	3
3⅜	1⅜	100	1¼	1¼	1¼	Louisiana Oil Refining	1,302.158	N.P.	....	.....	4	⅝	2¼	½	4½	1
14¾	9⅛	3,900	11	9⅜	10⅜	Mid-Continent Petroleum	1,857.912	N.P.	25c	5-15-34	16	3⅜	8⅞	3¾	16⅝	5
20¾	10	3.000	12½	10½	12⅝	National Supply of Delaware	382.591	$25	....	5-15-31	28⅝	4	13	3½	10¼	5
15⅞	8½	7,900	10	9⅛	9½	Ohio Oil Co.	6,563,107	N.P.	15c	6-15-34	17⅝	4⅜	11	5	19½	5⅛
8⅝	5⅜	600	6	5¾	5⅝	Pacific Western Oil	1,000.000	N.P.	25c‡	10-25-33	9½	3	8	3	15	2⅜
2½	⅝	200	1	⅝	⅝	Panhandle P. & R.	198.770	N.P.	....	.....	4¼	⅜	1¼	¼	4¼	⅝
20¾	14¼	11.400	16¼	15⅛	15¼	Phillips Petroleum	4,154,687	N.P.	25c	9-1-34	18⅜	4⅝	8⅛	2	16⅝	4
16⅜	8	3.800	9⅝	9	9	Plymouth Oil Co.	990.261	$5	25cQ	6-30-34	17⅝	6⅜	12½	6	18	6
14⅞	7½	10,100	8⅜	7⅝	8	Pure Oil	3,038.370	N.P.	....	9- 1-30	15⅜	2½	6½	2⅞	11⅞	3¼
39⅛	32¼	300	32⅝	32¼	32⅝	Royal Dutch N. Y. shares	432.224	$14	$1.35	7-31-34	39⅜	17⅝	23⅜	12⅛	42⅝	13
38⅜	24½	3,400	27	24½	26	Seaboard Oil of Delaware	1,204.460	N.P.	15cQ§	9-15-34	43⅜	15	20⅜	6⅝	20⅜	5½
11⅞	6½	4,500	7¼	6½	6⅞	Shell Union Oil	13,070.625	N.P.	....	6-30-30	11⅝	4	8⅜	2½	10¼	2½
89	57	400	61	57	61	Shell Union Oil pfd.	400,000	$100	....	7- 1-31	61	28½	65¼	18	78	15
11¼	7¼	500	8½	7⅞	8½	Simms Petroleum	461.000	$10	30c	8- 1-34	12⅜	4⅞	7½	3¼	11	3½
11½	6¾	100	7½	7½	7½	Skelly Oil	1,008.514	$25	....	12-15-30	9⅞	3	5⅜	2½	12⅞	2
19⅞	12½	27,900	14¼	13½	13⅜	Socony-Vacuum	30,905.006	$25	15cQ	6-15-34	17	6	12¼	5¼	21	8⅜
42⅞	30⅝	9,400	33½	31¼	33½	Standard Oil of California	13,102,900	N.P.	25c	9-15-34	45	19½	31⅞	15⅛	51⅜	23¼
41	30	500	31⅝	30	30½	Standard Oil of Kansas	200,000	$10	50cQ	10-31-34	39⅞	12⅜	16½	7	19	7⅜
50⅛	40⅝	17,000	43½	40⅞	43	Standard Oil of New Jersey	25,740,965	$25	50c8A	6-15-34	47½	22¾	37⅜	19⅞	52½	26
64	51½	500	64	59¼	64	Sun Oil	1,733,013	N.P.	25cQ	9-15-34	59	35	39⅞	24⅜	45¼	26⅜
29⅜	20	10,200	22⅝	21¼	22	Texas Corp.	9,352.371	$25	25cQ	7- 1-34	30⅛	10⅜	18⅛	9¼	36¼	9⅞
6½	2½	1,600	3⅛	2⅞	3	Texas Pacific Coal & Oil	880,703	$10	....	12-31-29	6½	1⅜	4	1½	6½	1⅞
14¼	8½	18,400	9⅝	9	9¼	Tide Water Associated	5,618.672	N.P.	....	2-16-31	11⅜	3½	5⅝	2	9	2¼
84¾	64½	500	82	78	81	Tide Water Associated pfd.	666.524	$100	$1.50Q	4- 1-34	65¼	23½	60	20	68	20½
20½	13¾	5,100	15⅜	14	15	Union Oil of California	4,386,070	$25	25cQ	8-10-34	23⅜	8½	15⅝	8	26⅝	11
21¼	15¼	400	18⅝	18¼	18¼	Union Tank Car	1,200.000	N.P.	30cQ	6- 1-34	22⅜	10½	19¼	11⅜	25½	16
5⅜	2½	2,100	3¼	2½	3¼	Wilcox Oil & Gas	424.839	$5	....	5-10-28	5½	2	8¾	2¾	9⅜	2¾

*Ex-dividend. †Payable in 5 per cent convertible preferred stock. ‡Initial dividend. §Plus extras.

Active Oil Stocks Listed on New York Curb

Compiled by Carl H. Pforzheimer Co., 25 Broad Street, New York City. Members New York Stock Exchange and New York Curb Exchange

1934 High	1934 Low	Week ended Aug. 4 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	1933 High	1933 Low	1932 High	1932 Low	1931 High	1931 Low
38	26	No sales		..	..	Buckeye Pipe Line Co.	200.000	$50	75eQ	9-15-34	39¾	25	35	17½	56	30
5½	2⅝	3,700	3⅛	2¾	3⅛	Carib Syndicate	579.000	25c	....	.....	7¾	⅛	⅝	⅛	2⅝	⅛
126½	115	50	123	123	123	Chesebrough Mfg. Co.	120.000	$25	$1Q†	6-29-34	129	71	90	53	129½	75
4¼	1⅝	20,600	1⅞	1¾	1⅞	Cities Service	37,804.394	N.P.	....	6- 1-32	6¼	1½	6⅞	1¼	20¾	5
3¼	1¼	200	1¼	1¼	1¼	Colon Oil	2,200.000	N.P.	....	.....	4	¼	1¼	¼	3⅛	⅛
3⅞	1⅛	600	1⅜	1¼	1¼	Cosden Oil	399.687	$1	....	.....	3½	1⅜	2⅞	¼	3⅝	⅜
13⅜	9⅝	5,900	12⅛	11¼	11⅝	Creole Petroleum	6,974.356	$5	....	.....	12	4⅜	3½	1¾	3⅞	1⅝
7½	4¾	No sales		..	..	Darby Petroleum	509.696	$5	25c	2-15-34	8	2½	7⅛	1⅝	2½	1⅝
2¼	1¼	No sales		..	..	Derby Oil & Refining	263.162	N.P.	....	.....	2¾	⅞	3	1	6	1½
36	30	No sales		..	..	Eureka Pipe Line	50.000	$100	$1Q	8- 1-34	41¾	20	35	18	36	19
76¾	50	3,100	57¼	52	55	Gulf Oil Corp.	4,538.101	$25	....	10- 1-31	62	24	44¾	23	75½	25⅜
46¾	33½	8.600	42⅝	39¾	41⅞	Humble Oil & Refining (new)	8,923.935	N.P.	25cQ	7- 1-34	106½	40	55	35⅝	72	44½
15½	12⅝	4,900	14⅜	13¼	14	Imperial Oil of Canada	26,857.152	N.P.	25c8A†‡	6- 1-34	15⅞	6½	10⅞	6¼	18¼	7⅜
6⅞	3⅞	200	4¼	4	4	Indiana Pipe Line	300.000	$10	15c8A	5-15-34	8	3⅛	7½	2⅜	21⅛	5½
30⅝	19⅜	9.400	26⅞	25	26¼	International Petroleum	14.247.088	N.P.	56c8A†‡	6- 1-34	23½	8⅝	12¼	8	15½	7⅜
3⅜	2⅞	5,300	3⅜	3⅛	3⅜	Louisiana Land & Exp.	3,000.000	N.P.	....	.....	2¼	⅛	2½	½	2	½
5⅞	3½	100	3⅜	3⅜	3⅜	Lion Oil Refining	270,000	N.P.	....	10-27-30	9½	1¾	3½	⅞	6⅜	1½
8¾	4⅝	1,400	5	4⅜	5	Lone Star Gas	5,382.723	N.P.	16cQ§	3-31-34	11⅞	4¾	11	3⅜	29	5½
5½	4	1,200	4⅝	4⅝	5	Mountain Producers	1,503.584	$10	15cQ	4- 2-34	6½	2½	4⅜	2½	5⅞	2
18⅛	13½	900	15	13⅝	15	National Fuel Gas	3,810,183	N.P.	25cQ	4-16-34	20	10	14⅝	8	26½	9⅜
9⅛	7⅝	100	7¾	7¾	7¾	National Transit	500.000	$12.50	40c8A	6-15-34	10	5½	10½	6	17½	5
2¼	1¾	700	2¼	2⅛	2⅛	New Bradford Oil	1,445.202	$5	10c	3-15-34	2⅛	½	⅞	¼	1½	½
2¾	1	500	1⅛	1⅛	1⅛	New Mexico and Arizona	1,000.000	$1	....	.....	1⅞	½	1¼	⅝	3	⅝
4¾	3	No sales		..	..	New York Transit	100.000	$5	15c8A	4-14-34	4⅞	3	9¾	7½	14½	5⅞
7	4⅝	No sales		..	..	Northern Pipe Line	120.000	$10	25c8A	1- 2-34	6⅛	4¼	5½	3⅛	35½	20
2⅝	⅞	2.500	1½	1¼	1⅜	Pantepec Oil	1,608.700	N.P.	....	.....	3¾	⅛	⅝	⅛	2	⅝
3⅛	1	No sales		..	..	Ryan Consolidated	296.931	N.P.	....	.....	4¼	⅝	2½	⅝	3	⅝
7⅞	5½	1,000	6	5½	5¾	Salt Creek Producers	1,496.859	$10	20cQ	8- 1-34	9¼	3½	5½	2⅞	7⅝	2¾
26½	17½	4,000	22	19¾	21½	South Penn Oil	1,200,000	$25	30cQ	6-30-34	22¼	11	16½	9⅝	23⅞	9¼
5¼	4	100	4⅛	4⅛	4⅛	Southern Pipe Line	100,000	$10	15c8A	9-1-34	6	2⅛	10	3⅜	17	7
47	41	No sales		..	..	Southwest Penna. Pipe Lines	35,000	$50	$1Q	7- 2-34	43	24½	37	27	42½	25
32¾	25	11,000	26	25⅜	25⅝	Standard Oil of Indiana	15.528.504	$25	25cQ	3-15-34	34	17	25⅛	13½	38½	13½
17⅝	14⅝	2,400	15¾	14⅝	15⅝	Standard Oil of Kentucky	2,606.983	$10	25cQ	6-15-34	19¼	8¾	15⅞	8⅞	23⅝	12⅛
16⅝	9	200	11	10½	11	Standard Oil of Nebraska	190.822	$25	25cQ	6-20-34	20½	11	19	10¼	36½	16
27½	14	1,150	16⅞	15	16	Standard Oil of Ohio	753.740	$25	....	1- 3-33	41	15½	30⅛	15½	62½	23
2	1⅛	2,000	1⅛	1	1	Sunray Oil	1,162.840	$5	....	4-15-31	1½	¼	⅝	⅛	5¼	⅛
11	4⅜	100	5	5	5	Texon Oil & Land	936,028	N.P.	15cQ	6-30-34	13¾	6¼	10½	4½	12⅞	2½

*Ex-dividend. †Plus extras. ‡Payable in Canadian funds. §Payable in preferred stock.

Note—In comparing highs and lows for the several years in the two tables, it will be necessary to take into consideration cases where there have been stock split-ups.

Eastern Fields

(Continued from Page 54)

farm in Center district from the Injun sand to the Berea sand. It is 13,000 feet southeast of its No. 1 on the Daniel Huffman farm. In this district, a new test is that of Dotson Norman and others on the Bud Stump and others' farm. Hope Construction & Refining Co. has a rig standing for No. 3571 on the A. H. Blackshire farm and a location for No. 3572. Godfrey L. Cabot, Inc., is down 2,070 feet in No. 2 on the J. P. Norman farm which is being drilled deeper from 1,602 feet. In DeKalb district, No. 4 of Clem Morris and others on the Cora B. Gainer farm reported good for 5 bbls. in the salt sand at 1,681 feet proved not worth pumping after shot, and it is being drilled deeper. A. E. Ellis and others are down 1,845 feet on the Ware and Webster lease, No. 4.

In Kanawha County, Valley Gas Co. has part of the material on the ground for a second test on the G. W. Harless farm in Elk district. In Malden district, Godfrey L. Cabot, Inc., is down 1,340 feet on the Campbells Creek Coal Co. lease, No. 7 and 1,804 feet on the W. P. Tompkins farm, No. 6. In Cabin Creek district, this operator has reached 1,330 feet in No. 45 on the A. D. Huntington lease and 464 feet in No. 46.

In Monongalia County, Pedlar Run Oil Co. has resumed drilling on the Lewis R. Hess farm in Clay district and it is down 2,605 feet. In this district, Chartiers Oil Co. has reached 2,297 feet on the Simon Shriver heirs' farm, a test. In Battle district, Harry L. Tennant is down 3,330 feet on the Wise and Tennant lease, No. 5.

SOUTHWEST PENNSYLVANIA

There were no completions in Southwest Pennsyvania during the week. Several wells are nearing the sands. In Amwell Township, Washington County, Carnegie Natural Gas Co. has reached 2,765 feet on the N. B. Redd farm. The Pittsburgh Coal was at 848 feet and the top of the Fifty Foot sand at 2,718 feet. There was a break at 2,731 to 2,733 feet and water showed at 2,746 feet. On the C. W. Farabee farm, this company has reached 1,630 feet. The Pittsburgh Coal was at 685 feet and the top of the salt sand at 1,605 feet. This company is rigging up on the A. M. Cole farm. More locations will be made in this section.

In South Franklin Township, Carnegie Natural Gas Co. started drilling No. 1 on the C. T. Dodd farm deeper from 2,698 feet, the Fifty Foot sand which extended from 2,676 feet to 2,710 feet. The Nineveh Thirty Foot sand extended from 2,775 feet to 2,810 feet. The top of the Gordon Stray sand was at 2,841 feet. It is scheduled for the Fifth sand production. In this section, Duquesne Gas Co. is moving in the tools on the John Day farm.

In East Findley Township, Union Gasoline & Oil Corp. is spudding in No. 4 on the Sadie Carter farm. There are two other locations in this township being prepared by the Natural Gas Co. of West Virginia, on the W. H. Ealy farm and the C. W. Ealy farm.

In Greene County, Carnegie Natural Gas Co. is drilling at 2,960 feet on the E. D. Patterson No. 1 which is being drilled deeper. It is in Perry Township. In Center district, J. B. Orondoff has reached 2 375 feet on the W. H. Scott farm. In Dunkard Township, Fred Garrison is drilling on the Henderson Coal Co. lease. The New Oil & Gas Co. has reached 765 feet on the J. F. Wilson farm. Greene County Gas Co. is waiting for the cement to set before drilling deeper No. 1 on the Stephen Crayne farm.

In Slippery Rock Township, Butler County, near Harlansburg, James H. Duff with other interests have started geophysical research in connection with the test on the Munnell farm which reached the lime below the Orskany sand.

In Jefferson Township, Fayette County, Carnegie Natural Gas Co. has reached 2,205 feet on the George N. Boyd farm.

Kansas Wildcats

(Continued from Page 53)

Langston et al's No. 1 Markle, NE SW Sec. 1-29-9w
T.D. 2,425 ft.; S.D.

Robertson et al's No. 1 Johnson, NW cor. SW Sec. 22-19-8w.
Drlg. 2,780 ft.

Yingling et al's No. 1 Maupin, NW SW SW Sec. 1-18-8w.
Rigging up.

ROOKS COUNTY

Ashby et al's No. 1 Doughty, C SW SW Sec. 15-8-19w
Drlg. 2,760 ft.

Phillips Pet. Co.'s No. 1 Dopita, C SW SW Sec. 31-8-17w.
Deepened to 3,345 ft. and set 7-in. cag.; cleaning out.

RUSSELL COUNTY

Blair et al's No. 1 Funk, SW NW SE Sec. 16-14-14w.
Location.

Blair et al's No. 1 Hill, SW NE Sec. 14-13-14w.
Siliceous 3,314 ft.; 3,338 ft., H.F.W.; 5-in. liner 3,337 ft.; drlg. 3,349 ft.

Eldorado Ref. Co.'s No. 1 Straaman, SW SE SE Sec. 32-14-11w.
Location.

Lario et al's No. 1 Nudenthal, NE NE Sec. 23-14-15w
Drlg. 1,660 ft.

SCOTT COUNTY

Atlantic Oil Prod. Co.'s No. 1 Vaniman, C SE NE Sec. 15-20-33w.
Cellar.

SEDGWICK COUNTY

Bar Key Pet. Co.'s No. 1 Swenson, C NE Sec. 6-26-2.
Chat 2,976-82 ft., T.D.; pump. 68 bbls. 24 hrs.; S.D. repairs.

Corn & Aylward's No. 1 Heck, NW SW Sec. 2-27-1w.
Siliceous 3,611-19 ft., T.D.; H.F.W.; D.&A.

Cromwell & Lewis' No. 1 Hammond, SW NW Sec. 23-27-2w (O.W.D.D.).
Rigged up and S.D.

Jones, Kirk et al's No. 1 McQuillan, NE NW NE Section 21-29-2w.
Spudding.

Shawver et al's No. 1 Schulte, NE NE Sec. 13-28-2w.
6-in. 3,393 ft.; T.D. 3,396 ft.; fishing.

Sovereign Oil Co.'s No. 1 Nichols, C NW SE Sec. 20-25-1w.
Set 5-in. cag. 2,738 ft.; T.D. 2,740 ft.; C.O.

Trees Oil, Derby Oil et al's No. 1 McMinn, NW SW NE Sec. 36-26-1e.
S.D. 2,219 ft.

SUMNER COUNTY

Morgan & Flynn's No. 1 Mercer, NW NE NW Sec. 36-32-1w
Chat 3,697 ft.; T.D. 3,706 ft.; S.O.; U.R. 6-in. cag.

Wentz and Continental's No. 1 Small, NW SW Sec. 5-33-4w
T.D. 1,365 ft.; fishing.

TREGO COUNTY

Alma Pet. Co. et al's No. 1 Rhodes estate, SW SW Sec. 14-11-23w
Siliceous lime 3,978 ft.; T.D. 4,222 ft.; H. F.W.; to P.B.

Mid-Kansas O. & G. Co.'s No. 1 Kline, SW SE Sec. 19-14-24w.
Drlg. 1,240 ft.

WASHINGTON COUNTY

Rose Oil Co. et al's No. 1 [illegible], NE NW SE NE Sec. 16-3-3 (O.W.D.D).
Old T.D. 1,720 ft.; R.U. and S.D

WOODSON COUNTY

Schwartz et al's No. 1 Collins, SW NW NE Sec. 36-23-14.
S.D. 300 ft.

Gulf Coast Wildcats

(Continued from Page 57)

Texas Co.'s No. 2 Houston Oil Field Assn., 247.5 ft. S, no deg. 25 ft. W and 419.4 ft. N 89 deg. 32 ft. W from NE cor. of Lot No. 16. A.C.H.&B. Sur. No. 91.
Drlg. shale and lime 2,724 ft.

Texas Co.'s No. 2 Lieder, 646 ft. N. 230 ft. W of SE cor. of Lot No. 2, A.C.H.&B. Sur. No. 91.
Drlg. gumbo 1,115 ft.

Texas Co.'s No. 1-A Massey, 330 ft. out of NW cor. of 23-ac. tract in H. Stevens Sur.
Drlg. gumbo 1,160 ft.

Texas Co.'s No. 1 Rash, 330 ft. S. 42 deg. W. and 320 ft. S. 48 deg. E. from NW cor. of lease in Thos. Sproggins Sur. No. A-366.
Location.

Wilson Oil Co.'s No. 1 Colby, 325 ft. from NW line and 330 ft. from NE line of 50-ac. lease in T. Sproggins Sur.
T.D. 5,120 ft.; comp. 30 bbls. hour, ¼-in. choke, T.P. 250 lbs.

WEST COLUMBIA—BRAZORIA COUNTY

Miramar Oil Corp.'s No. 3 Hogg, 100 ft. N of No. 2 and 100 ft. from W line of lease.
Drlg. sand and shale 5,394 ft.

Texas Co.'s No. 30 Hogg, 485 ft. N. 50 ft. W from SE cor. of lease in M. Varner Sur.
T.D. 5,053 ft.; P.B. 4,635 ft.; W.O.C.

BARBERS HILL—CHAMBERS COUNTY

Mills Bennet Prod. Co.'s No. 3-B Gulf fee, 25 ft. out of SE cor. of lease.
T.D. 4,717 ft., sandy shale; washing.

Mills Bennett Prod. Co.'s No. 2-B Wilburn, Henry Griffith league, 737 ft. E W line and 190 ft. S N line of lease.
Coring oil sand 4,219 ft.

Humble O. & R. Co.'s No. 6-B Kirby, 593 ft. N of S line, 258 ft. E of W line of lease, or 128 ft. N and 258 ft. W of No.5.
Drlg. salt 4,390 ft.

Moody Corp.'s No. 5-A E. W. Barber, 100 ft. E of W line and 75 ft. N of S line of lease.
Coring shale 4,412 ft.

Moody Corp.'s No. 6-A Barber, 75 ft. W of E line and 400 ft. N of S line of lease.
Drlg. salt 3,466 ft.

Sinclair Prairie Oil Co.'s No. 18-A Wilburn, Henry Griffith league, 150 ft. W of No. 17-A and 14 ft. S N line of lease.
Drlg. plug 3,854 ft.

Sun Oil Co.'s No. 9 Chambers Co., 181 ft. W of No. 5 and 50 ft. from N line of lease.
Top salt 1,379 ft.; T.D. 3,908 ft.; comp. 144 bbls. oil through ¼-in. choke, T.P. 140 lbs., C.P. 300 lbs.

Sun Oil Co.'s No. 6 Higgins, 302 ft. W of E line and 432 ft. N of S line of lease.
Drlg. shale 192 ft.

Sun Oil Co.'s No. 10 Higgins, 50 ft. from N and W lines of lease.
Rigging up.

Sun Oil Co.'s No. 22 Wilburn, midway betw. wells No. 17 and 21, or 150 ft. from each well.
Drlg. sandy shale 965 ft.

Texas Co.'s No. 1 Wilburn, 116 ft. S of Humphrey's No. 8-H Kirby, in Henry Griffith league.
Drlg. oil and sand 4,934 ft.; T.S. 4,898 ft.

Texas Gulf Prod. Co.'s No. 5 A. L. Barber, 400 ft. S of N line and 50 ft. E of W line of lease.
T.D. 5,549 ft.; comp. 686 bbls., 9/32-in. choke, 700 lbs. pressure.

Texas Gulf Prod. Co.'s No. 2 Eberspacher 480 ft. from S line and center of strip No. 4.
Drlg. rock 1,198 ft.

Yount Lee Oil Co.'s No. 25 Chambers County, 75 ft. E. 50 ft. W of NE cor. of lease.
Drlg. cap rock 1,280 ft.

Yount Lee Oil Co.'s No. 26 Chambers County, 50 ft. N of S line and in line with Chambers Co.'s No. 3 and Sun's No. 9 Chambers.
Drlg. sand, shale and lime 1,246 ft.

Yount Lee Oil Co.'s No. 27 Chambers Co., 400 ft. W of No. 24 and in line with Nos 24 and 21.
Derrick.

Yount Lee Oil Co.'s No. 7 Phillips, prep. to work over.
Oil sand 5,110 ft.

Yount Lee Oil Co.'s No. 9 Phillips, 100 ft. W of No. 8.
Location.

BAYS BLUFF—FORT BEND COUNTY

San Jacinto Oil Co.'s No. 4 Blakley, 3,480 ft. W of E line, 180 ft. S of N line of Edwards Drew Sur
T.D. 3,400 ft.; S.D.

BOLING—FORT BEND COUNTY

Trans-State Oil Co.'s No. 1 Joseph Fojtek, NE cor. of 68.29-acre tract, ½ mile W of new discovery.
Prep. to spud.

KATIE RIDGE—FORT BEND COUNTY

Gulf Prod. Co.'s No. 7-A Mary Gubbie, 970 ft. S and 300 ft. W of NE cor. of 120-ac. tract No. 3, in Sam Kennedy Sur.
Drlg. sand and boulders 3,872 ft.

Humble-Gulf's No. 28-A Lockwood & Sharp, 379 ft. from S line and 2,872 ft. from E line of "A" lease in J. Rabb Sur.
Rigging up.

Humble-Gulf's No. 29-A Lockwood & Sharp.
Location.

Humble-Gulf's No. 28-D Lockwood & Sharp.
Location.

Humble-Gulf's No. 30-A Lockwood & Charp, 4,296 ft. W of E line and 293 ft. S of N line of lease in J. Rabb Sur.
Derrick.

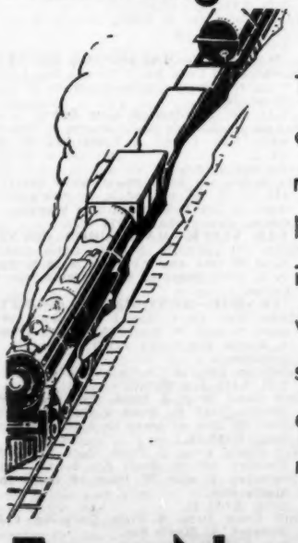
Humble-Gulf's No. 31-A Lockwood & Sharp, 5,170 ft. W of E line and 292 ft. S of N line of lease in J Rabb Sur.
Derrick.

Humble-Gulf's No. 32-A Lockwood & Sharp, 6,391 ft. W of E line and 293 ft. S of N line of lease and 1,149 ft. W of No. 31-A in J. Rabb Sur.
Derrick.

Humble-Gulf's No. 33-A Lockwood & Sharp, 150 ft. W of E line and 293 ft. S of N line, being direct offset to Myers' No. 11 in J. Rabb Sur., Tract No. 2.
Location.

Humble-Gulf's No. 11 Meyers, 410 ft. W of

Serving Oil Interests



The First National is the dominant bank in a great oil region. It serves many of the leaders of the oil industry in a friendly and adequate way—and invites the consideration of those oil interests, large or small, that are not now banking here.

First National Bank
in Dallas

E line of Myer 180-ac. tract and in center of tract being 392 ft. N of S line of John Rabb Sur.
T.D. 5,285 ft.; comp 56 bbls. hour, ⅝-in. choke.

ORCHARD—FORT BEND COUNTY

Gulf Prod. Co.'s No. 40 Moore.
Drlg. shale 3,879 ft.

HIGH ISLAND—GALVESTON COUNTY

Yount Lee Oil Co.'s No. 4 Broussary & Orme, M. Dunman Sur., 139 ft. SW of No. 3.
T.D. 5,939 ft.; washing.

Yount Lee Oil Co.'s No. 41 Cade, Fitzsimmons Sur.
Drlg. hard sand 4,363 ft.

Yount Lee Oil Co.'s No. 40 Cade, 420 ft NW of No. 2-B, 360 ft. from E line of lease and in line with No. 39 and No. 2-B Fitzsimmons Sur.
Drlg. hard sand 5,131 ft.

Yount Lee Oil Co.'s No. 22 Smith.
Coring sand and shale 5,040 ft.

Yount Lee Oil Co.'s No. 42 Cade, N. Fitzsimmons Sur., half way between Nos. 36 and 28 and 150 ft. E at right angles.
Derrick.

Yount Lee Oil Co.'s No. 1 Mace Stewart, Martin Dunman Sur.
Drlg. sand and boulders 375 ft.

ARRIOLA—HARDIN COUNTY

Republic-Houston's No. 2-X Arriola fee.
T.D. 6,290 ft.; P.B. 4,790 ft.

Republic-Houston Oil Co.'s No. 8 fee.
Drlg. 4,350 ft.

SARATOGA—HARDIN COUNTY

Rio Bravo Oil Co.'s No. 4 E. Jordit, 300 ft. due W of No. 109 Jordit.
Coring 1,086 ft.

SOUR LAKE—HARDIN COUNTY

Alpha Pet. Co.'s No. 1 J. M. Weiss, 122 ft. S of Steinberger's No. 1 Weiss in Blk. 28.
T.D. 7,012 ft.; prep. to run packer.

Alpha Pet. Co.'s No. 2 Weiss estate, 66 ft. N and 100 ft. W from SE cor. of 5-ac. tract in Lot 28, H. Williams Sur.
Location.

Humble O. & R. Co.'s No. 1 Kirby et al, 149 ft. E W line and 300 ft. S N line of old Gulf 170-ac. tract, S. Jackson Sur.
T.D. 5,765 ft.; P.B. 5,456 ft.; W.O.C. 5,622 ft.

Parr et al's No. 1 Benard, in W.C.R.R. Sur. No. 69 (west edge).
T.D. 7,061 ft.; P.B. 4,800 ft.; making est. 35 bbls. daily.

Steinberger Pet. Co.'s No. 1 Weiss, 150 ft. W of Parr No. 1 and 50 ft. out of SE cor. of Blk. 28, H. B. Williams Sur.
Location.

Texas Co.'s No. 309 fee, 302 ft. S and 48 ft. E of No. 308 fee, in Stephens Jackson League.
T.D. 1,849 ft.; comp. 18 bbls. hour, ½-in. choke, T.P. 50 lbs., C.P. 200 lbs.

Texas Co.'s No. 310 fee, 400 ft. N and 60 ft. E of No. 308 fee.
Location.

GOOSE CREEK—HARRIS COUNTY

Werring's No. 1 Williams, 150 ft. from SE cor. and 55 ft. NE of Hybush's No. 3, in W. Scott upper league.
Cellar.

Humble O. & R. Co.'s No. 80 Simms-Smith.
Drlg. shale 4,078 ft.

Humble O. & R. Co.'s No. 28 Sweet, 13 ft. W of SE cor. of Scott 2½-ac. tract and 58 ft. from N line of lease, Wm. Scott Sur. No. 67.
Location.

Jay Simmons' No. 1 Dannebaum, 45 ft. from S and 50 ft. from E lines of lease in W. Scott Labor Sur.
Abandoned.

HUMBLE—HARRIS COUNTY

Imperator Oil Co.'s No. 1 N. N. Lee, 400 ft. from E line and 150 ft. from N line of 88-ac. tract in E. Ruhl Sur.
T.D. 3,170 ft.; drlg. ahead.

Texas Co.'s No. 48 Stevenson, 485 ft. S and 359 ft. E of NW cor. of Lot No. 1-A, J. B. Stevenson Sur.
T.D. 2,264 ft.; abnd.

PIERCE JUNCTION—HARRIS COUNTY

Benedum & Trees' No. 1 W. J. Settegast, 1,629 ft. from S line of Sur., and 100 ft. from E line of tract in the J. Kopman Sur.
Drlg. shale 3,685 ft.

Gulf Prod. Co.'s No. 10 H. C. Cain, 399 ft. S and 290 ft. E of NW cor. of lease and 317 ft. N of No. 9, 160-ac. tract in J. Hamilton Sur. No. 879.
Comp. 834 bbls., 33 per cent b.s. and w., ⅝-in. choke.

Rio Bravo Oil Corp.'s No. 9-A Settegast, 1,575 ft. N line, 350 ft. E line NE cor. "A" lease, J. A. Kopman Sur.
T.D. 4,510 ft.; rigging up to work over; standing.

Rio Bravo Oil Corp.'s No. 12-A Settegast, 1,410 ft. N line, 650 ft. E line, J. A. Kopman Sur.
Drlg. shale 5,932 ft.

TOMBALL—HARRIS COUNTY

Amerada-Rycade's No. 1-A Metzler, J. House Sur.
Drlg. 2,726 ft.

Continental Oil Co.'s No. 2 Petrich, 1,900 ft. from S line and 157 ft. from E line of 50-acre tract.
Rigging up.

Houston Oil Co.'s No. 1 Fred Heard, 835 ft. from N line and 691 ft. from E line of lease in J. M. Hooper Sur.
T.D. 5,578 ft.; comp. 5 bbls. hour, ¼-in. choke, T.P. 1,900 lbs., C.P. 1,900 lbs.

Humble-Magnolia's No. 3 C. F. W. Hendricks, 966 ft. S of N line and 466 ft. W of E line of 96-A, tract in Wm. Heard Sur.
T.D. 5,589 ft.; comp. 2,500,000 ft. gas, ¼-in. choke.

Humble Oil & Ref. Co.'s No. 1 Christine Holderreith, 377 ft. from N line and 466 ft. from E line of most northerly NE cor. of 85-acre tract in J. House Sur.
Location.

Humble Oil & Ref. Co.'s No. 1 Kleb, 900 ft. from S line and 741 ft. from W line of 97-acre tract in W. Heard Sur.
T.D. 5,604 ft.; W.O.C.

Humble-Magnolia's No. 1 Krug, 600 ft. N and 127 ft. E from SW cor. of J. F. W. Kobs, 30.6-ac. tract in J. H. Edwards Sur.
Location.

Humble-Magnolia's No. 2 Krug, 466 ft. from E line of lease and 600 ft. S of S line of Sherer 112-ac. tract in J. H. Edwards Sur.
Location.

Humble & Magnolia Pet. Co.'s No. 2 B. J. Petrick, 700 ft. S of N line, 1,171 ft. W of E line of lease in J. M. Hooper Sur. No. A-372.
T.D. 5,567 ft.; W.O.C.

Humble-Magnolia's No. 2 Jacob Theis, O. Goodrich Sur. No. A-311.
T.D. 5,573 ft.; comp. 24 bbls. hour, ¼-in. choke.

Sun and Humble O. & R. Co.'s No. 1 Metzler, 34 ft. N and E of NE cor. of 2-ac. graveyard in 90-ac. lease in C. N. Pillot Sur. No. 632.
T.D. 5,559 ft.; setting strtainer.

Texas Co.'s No. 3 Hirsch, 466 ft. W of E line and 100 ft. N of S line of lease.
Drlg. hard sand 2,944 ft.

FANNETTE—JEFFERSON COUNTY

Gulf Prod. Co.'s No. 15 Thomas, 200 ft. W of Gulf's No. 7 Burrell.
Derrick.

CLEVELAND—LIBERTY COUNTY

Gulf Prod. Co.'s No. 5-C Kirby, 944 ft. W, 500 ft. S of No. 4-C in the J. Pleasant Sur.
T.D. 1,061 ft.; W.O.C.

ESPERSON—LIBERTY COUNTY

General Crude's No. 13 Moore's Bluff, 150 ft. W of E line and 2,100 ft. S of N line of lease and 1,000 ft. N of No. 12.
Drlg. sticky shale 2,994 ft.

General Crude Oil Co.'s No. 8 Davis, 660 ft. from S and 1,000 ft. from E line of lease in D. Kokernut Sur.
T.D. 4,112 ft.; flowing 80 bbls. day by heads.

General Crude Oil Co.'s No. 9 Davis, 1,200 ft. each way from S and E lines of lease in D. Kokernut Sur.
Location.

HANKAMER—LIBERTY COUNTY

George Devore et al's No. 1 S. E. Exell, 175 ft. S of Gulf's No. 1 and 165 ft. from E line of 175-ac. lease in Levi Barrow Sur.
Spudded and S.D.

Mirimar Oil Co.'s No. 2 Crow & Jacobs, H. &T.C. Sur. No. 21.
Drlg. shale 5,790 ft.

HULL—LIBERTY COUNTY

Flynn's No. 1 Flynn, J. Devore Sur.
T.D. 1,517 ft.; S.D.

Gulf Prod. Co.'s No. 104 Phoenix, 2,479 ft. from W line and 1,115 ft. from S line of 300-ac. tract in J. Devore Sur.
Drlg. sandy shale 4,272 ft.

Hanna Oil Co.'s No. 1-B Hanna, 50 ft. E line and 533 ft. S line of 20-ac. lease in J. Devore Sur.
Drlg. gumbo 1,800 ft.

Repuolic Prod. Co.'s No. 153 Dolbear, 400 ft. N and 45 deg E. from No. 151, in the J. Devore Sur.
Derrick.

Republic Prod. Co.'s No. 155 Dolbear.
Drlg. sand and shale 2,194 ft.

Sun Oil Co.'s No. 8-A Carr, 224 ft. from N line and 563 ft. from W line of lease in J. Devore Sur.
T.D. 5,053 ft.; set strainer.

Sun Oil Co.'s No. 9-A Carr, 223 ft. from N line and 307 ft. from W line of lease in J. Devore Sur.
Rigging up.

Texas Co.'s No. 9 Hannah, 350 ft. N and 300 ft. W of No. 5 Hannah.
Drlg. sandy lime rock 2,522 ft.

LIBERTY COUNTY

Mrs. I. M. Lemon Oil Co.'s No. 1 Richardson, 120 ft. E of Gulf & Humble's No. 1 Carter, in M. G. White Sur.
T.D. 2,882 ft.; abnd.

Texas Co.'s No. 22 Stalti, 350 ft. S and 50 ft. E of No. 14.
Derrick.

MARKHAM—MATAGORDA COUNTY

Hawkins Oil Co.'s No. 1 Hawks fee, 1,350 ft. from N line and 1,650 ft. from E line of 20-ac. lease.
T.D. 600 ft.; derrick blew down.

Powers Prod. Co.'s No. 4 Myers, in line with wells Nos. 1 and 2, being 250 ft. E of No. 2.
Derrick down.

Rio Bravo Oil Co.'s No. 1 Sisk, 550 ft. N. 650 ft. W SE cor. of R. J. Sisk's 158-ac. tract in Lot 2, Wm. Haddon league.
Coring sandy shale 3,377 ft.

VAN VLECK—MATAGORDA COUNTY

Skelly Oil Co.'s No. 2 F. G. Cobb, 1,185 ft. E of W line and 2,515 ft. N of S line of F. G. Cobb lease in Marie Cummings Sur.
Cellar.

CONROE—MONTGOMERY COUNTY

Alpha Pet. Co.'s No. 1 Hensley, 466 ft. from N and W lines of 25-acre lease in A. Steele Sur.
Location.

American Liberty Oil Co.'s No. 2 Allen.
T.D. 5,100 ft.; W.O.C.

Gulf Coast Drlg. & Prod. Co.'s No. 1 E. E. Hensley, 467 ft. from S line and 466 ft. from W line of lease in A. Steele Sur.
Drlg. 5,105 ft.

Gulf Coast Drlg. & Prod. Co.'s No. 3 J. L. Hensley, 467 ft. from No. 2 and midway between E and W lines of lease in A. Steele Sur.
Drlg. 3,630 ft.

Gulf Coast Drlg. & Prod. Co.'s No. 4 J. L. Hensley, A. Steele Sur.
T.D. 5,066 ft.; reaming.

Humble Oil & Ref. Co.'s No. 26 Keystone Mills.
T.D. 5,127 ft.; W.O.C.

Humble Oil & Ref. Co.'s No. 27 Keystone Mills.
T.D. 5,124 ft.; comp. 87 bbls. hour, ½-in. choke.

Humble O. & R. Co.'s No. 44-A South Texas Dev. Co.
T.D. 5,187 ft.; comp. 40 bbls. day, ¼-in. choke.

Humble Oil & Ref. Co.'s No. 69-A South Texas.
T.D. 5,165 ft.; W.O.C.

Humble O. & R. Co.'s No. 42 Madeley.
Drlg. shale 3,354 ft.

Humble O. & R. Co.'s No. 8-D South Texas
T.D. 5,147 ft.; comp. 39 bbls. hour, ½-in. choke.

Pine Tree Oil Co.'s No. 1 South Texas.
Shale 5,182 ft.; W.O.C.

Strake Oil Co.'s No. 1-B Dean, offset to Tide Water-Strake No. 8 Dean.
Location.

Sun Oil Co.'s No. 14 Keystone Mills, 1,760 ft. from N line, 2,274 ft. from W line of lease in A. Steele Sur.
T.D. 5,129 ft.; comp. 1,922 bbls., ½-in. choke.

Sun Oil Co.'s No. 20 Keystone Mills, 1,455 ft. E and W line and 466 ft. N and S line of lease.
Rigging up.

Sun Oil Co.'s No. 2 South Texas, 942 ft. N of No. 1 and in center of lease E and W in T.&N.O. Sur. No. 5.
T.D. 5,136 ft.; set whipstock 5,036 ft.

Texas Co.'s No. 18 Moody, N 60 deg., E 2,919 ft. N 30 deg. W 253 ft. from SW cor. of Ransom Sur. (workover).
T.D. 5,125 ft.; P.B. 5,080 ft.; comp. 18 bbls. hour, 3/16-in. choke.

ORANGE—ORANGE COUNTY

Trio Oil Co.'s No. 1 D. S. Comier, 89 ft. W of E line and 39 ft. S of N line of 6.83-ac. tract in W. M. Dyson Sur.
Rig up.

PORT NECHES—ORANGE COUNTY

Texas Co.'s No. 8 Kuhn, 1,320 ft. N and 350 ft. E of SE cor. of Mary E. Hall Sur. No. 3 in T. J. Notgrass Sur.
Derrick.

Texas Co.'s No. 2-B Polk, 695 ft. N, 150 ft. E of NE cor. of N. Jacob Beaumont Sur.
T.D. 6,708 ft.; sidetracking at 5,357 ft.

LIVINGSTON—POLK COUNTY

T. D. Humphries' No. 1 P. E. Orton, 330 ft. from S and W lines of 40-acre tract in A. Viesca Sur.
Rigging up.

T. D. Humphries' No. 1 J. C. Whitforth, Block H.
Derrick.

Kirby Pet. Co.'s No. 2 Kirby, 466 ft. from N and E lines of J. Stephenson Sur.
Location.

H. B. Owenby's No. 1 Duff, 75 ft. N of S line, 656 ft. W of E line of lease in A. Viesca Sur.
T.D. 4,350 ft.; S.D.

GRETA—REFUGIO COUNTY

Atlantic & Stanolind's No. 64 J. M. O'Brien, 466 ft. E line of lease and 932 ft. N of Winfield Sur. No. 43.
Drlg. 4,575 ft., shale; no report.

Floboots Oil Co.'s No. 3 E. O'Brien, 466 ft. from S line and 503 ft. from E line of E. H. Winfield Sur., Block 23.
Drlg. shale 200 gt.

Floboots Oil Co.'s No. 4-E O'Brien, 466 ft. from S line and 503 ft. from E line of Winfield Sur., Block No. 22.
Rigging up.

Floboots Oil Co.'s No. 3-F O'Brien, 466 ft. from S and E lines of Block No. 25 in Peoples Survey.
Drlg. shale 2,001 ft.

Hewitt & Dougherty's No. 8 Lambert, 460 ft. from N line and 507 ft. from E line of Blk. 18, E. W. Harper Sur.
Drlg. shale 2,792 ft.

Hewitt & Daugher.y's No. 9 M. F. Lambert, 466 ft. from N line and midway between E and W lines of Blk. 16, Hardwick Sur.
Rigging up.

Hewitt & Dougherty's No. 23 M. F. Lambert, 466 ft. from S line and 507 ft. from E line of Blk. 16, Hardwick Sur.
Drlg. shale 3,317 ft.; no report.

Houston Oil Co.'s No. 15 Heard, 660 ft. SE of No. 14 and 330 ft. NE of S line of lease.
Coring 3,440 ft.

Houston Oil Co.'s No. 15 F. B. Rooke, from SE cor. of lease 806 ft. N along E line, thence 150 ft. W at R/A in Mullin Sur.
Drlg. sandy shale 4,620 ft.

Houston Oil Co.'s No. 6 M. H. Ryals, 1,050 ft. from N line and center of E and W lines of lease.
Coring 4,080 ft.

Humble Oil & Ref. Co.'s No. 6 Fannie Heard, 1,499 ft. N line and 503 ft. W line of 327-acre tract in Ximines Sur.
Location.

Humble O. & R. Co.'s No. 4 Fannie Heard, 1,216 ft. from E line, 466 ft. from N line of lease in Ximines Sur.
T.D. 5,943 ft.; W.O.C.

Humble O. & R. Co.'s No. 3 J. F. B. Heard, 933 ft. N of No. 6 and 933 ft. E of No. 3, in Peoples Sur.
Drlg. sand 4,382 ft.

Humble Oil & Ref. Co.'s No. 9 J. F. B. Heard, 838 ft. N of No. 8 and 1,399 ft. E of lease line in Peoples Sur.
Drlg. shale 3,890 ft.

Stanolind O. & G. Co.'s No. 3-A J. M. O'Brien, Peoples Sur., begin at NE cor. of "A" lease, thence W along N line 1,509 ft.; thence S at right angles 466 ft.; S offset to No. 4-B.
S.D. 4,384 ft.

United Prod. Co.'s No. 7 W. T. Fox, 695 ft. SE of No. 6.
R.U. to deepen; T.D. 4,295 ft.

United Prod. Co.'s No. 16 Fox, 330 ft. W of No. 2-A in Wm. Hews and L. Brown Sur.
T.D. 5,831 ft.; S.D.

United Prod. Co.'s No. 7 Wilson Heard, 331 ft. S of No. 5.
Drlg. sticky shale 4,675 ft.

United Prod. Co.'s No. 8 Wilson Heard, 1,079 ft. SE from most northern point along NE boundary line of lease, thence 330 ft. SW at right angles.
Derrick.

United Prod. Co.'s No. 8 Lambert.
T.D. 4,882 ft.; P.B. 4,352 ft.; drlg. 4,393 ft.

United Prod. Co.'s No. 8 J. A. Lambert, 884 ft. N of NW cor. of W. Heard tract and 150 ft. W of tract line.
O.T.D. 3,584 ft.; drlg. hard shale 5,436 ft.

United Prod. Co.'s No. 9 Lambert, 466 ft. S line and 507 ft. E line of Blk. 17, H. & D. Subd. of Hardwick Sur., Abst. 159.
Drlg. shale 4,575 ft.

United Prod. Co.'s No. 9 Shelly Ryals.
Old T.D. 3,692 ft.; drlg. shale 5,530 ft.

O'CONNOR—REFUGIO COUNTY

Humble Oil & Ref. Co.'s No. 15 O'Connor, N 60 deg. W 933 ft. of No. 4 in Keeling Sur.
Derrick.

CLAY CREEK—WASHINGTON COUNTY

Sun Oil Co.'s No. 2 Mrs. A. Draeger, 1,320 ft. E of W line and 800 ft. N of S line of 205-ac. tract in J. F. Perry Sur.
Drlg. 646 ft.

Sun Oil Co.'s No. 9 Janner.
Coring 1,205 feet.

SOUTH LOUISIANA FIELDS

BLACK BAYOU—CAMERON PARISH

Brownie Babbette Oil Co.'s No. 1 R. A Moore, 562 ft. W, 50 ft. S of NE cor. of E½ of SE Sec. 18-13s-12w.
Prep. to work over; T.D. 6,642 ft.; drlg. shale 6,610 ft.; no report.

Shell Pet. Corp.'s No. 3 State.
T.D. 6,002 ft.; P.B. 4,670 ft.; fishing 5,584 ft.

Shell Pet. Corp.'s No. 19 Watkins fee, 1,320 ft. S. 2,185 ft. W of NE cor. Sec. 18-12-11
T.D. 3,879 ft.; prep. to make D.S. test.

BOSCO—ACADIA AND ST. LANDRY PARISHES

Humble O. & R. Co.'s No. 1 Joseph Berk located on 100-ac. tract lease in Sec. 21-8s-3e, about a mile and a half NW of the producer.
Location.

Shell Pet. Corp.'s No. 1 E. M. Eliaboutrout in Sec. 22-8s-3e. 1⅛ miles due N of discovery well.
Location.

Oswego Oil Co.'s No. 1 Joseph Mouton.
T.D. 1,395 ft.; S.D.

Superior Oil Co.'s No. 1 J. Sidney Arceneaux et al, 1,665 ft. N and 439 ft. W of SE cor of Sec. 3-8s-3e.
Drlg. hard sand 3,578 ft.

Superior Oil Prod. Co.'s No. 1 Mrs. Estelle Comeaux and others' 675.6 ft. W and 511.4 ft. S of NE cor. of Sec. 34-8s-3e.
Rigging up.

Superior Oil Producing Co.'s No. 1 Sidney Fail, 542.9 ft. W and 511.4 ft. N of SE cor. Sec. 27-8s-3e.
Rigging up.

Superior Oil Prod. Co.'s No. 1 Eddie Prejean (Alex Forrestier), 3,021.3 ft. W and 439.4 ft. S of NE cor. of Sec. 34-8s-3e.
Rigging up.

Superior Oil Prod. Co.'s No. 1 Adras Guilbeau, 492.6 ft. E and 508.2 ft. S from NW cor. of SW Sec. 26-8s-3e.
Cellar.

Superior Oil Co.'s No. 1 Leo E. Kahan et al, 2,381 ft. N and 468 ft. W of SE cor. of Sec. 33-8s-3e.
Drlg. sand 7,669 ft.

Superior Oil Prod. Co.'s No. 1 Walter V. Larcade, 462.4 ft. N and 500.2 ft. S of NW cor. of Sec. 35-8s-3e.
Bldg. derrick.

Superior Oil Prod. Co.'s No. 1 Euclide LeBlanc, 1,873 ft. S and 673.2 ft. W of NE cor of Sec. 33-8s-3e.
Derrick.

Superior Oil Prod. Cor.'s No. 1 Lucien Lavergne, 596 ft. E and 330 ft. N of SW cor. of Sec. 27-8s-3e.
Moving in material.

Superior Oil Prod. Co.'s No. 1 Moise Lavergne, 269.7 ft. W and 98 ft. N of SE cor. of Sec. 28-8s-3e.
Moving in material.

Superior Oil Prod. Co.'s No. 1 Auguste Martines, 2,510.6 ft. S and 1,057.2 ft. W of NE cor. of Sec. 35-8s-3e.
Drlg. sandy shale 4,929 ft.

Superior Oil Co.'s No. 1 Louanstie Richard, 2,378 ft. S and 465 ft. W of NE cor. of Sec. 34-8s-3e.
Drlg. shale and broken lime 8,280 ft.

Superior Oil Prod. Co.'s No. 1 Leonard Savoie, 814 ft. W and 658 ft. N of SE cor. Sec. 26-8s-3e.
Drlg. 553 ft.

Superior Oil Co.'s No. 1 Marcellus Savoie, 2,201 ft. S and 761 ft. W of NE cor. of Sec. 27-8s-3e.
Drlg. sand and shale 8,420 ft.

CAILLOU ISLAND—TERREBONNE PAR.

Texas Co.'s No. 12 State Caillou Island, 2,420 ft. E and 73 ft. S of NW cor. of Sec 20-23s-20e.
Drlg. shale 2,966 ft.

Texas Co.'s No. 13 State Caillou Island, 500 ft. SW of No. 11 well.
T.D. 3,965 ft.; comp. 1,978 bbls., ½-in. choke.

CALCASIEU LAKE—CAMERON PARISH

Texas Co.'s No. 10-A State, 16,855 ft. W and 3,270 ft. N of NE cor. Sec. 1-14s-9w in Twp. 15s-9w.
T.D. 6,568 ft.; S.D.

CAMERON MEADOWS—CAMERON PAR.

Hurton-Sutton Oil Co.'s No. 4 School Land, 2,891 ft. W and 150 N of SE cor. of Sec. 16-4s-12w.
Derrick.

Humble O. & R. Co.'s No. 8 Cameron Meadows, 2,895 ft. W, 150 ft. S of NW cor Sec. 21-14s-13w.
T.D. 5,548 ft.; P.B. 5,458 ft.; W.O.C.

Humble O. & R. Co.'s No. 1-B Cameron Meadows, 250 ft. W and 2,640 ft. S of NE cor. of Sec. 24-14s-14w.
Drlg. shale 6,678 ft.

Texas Co.'s No. 1 Miami Corp.
T.D. 5,052 ft.; S.D.

CHOCTAW FIELD—IBERVILLE PARISH

Standard Oil Co. of Louisiana's No. 6 Myrtle

Grove Wilbert, Sec. 52-9s-11e.
Drlg. shale 4,318 ft.

DOG LAKE—TERREBONNE PARISH

Texas Co.'s No. 16 State Dog Lake, 25 ft. N of No. 1 in Sec. 6-22s-16e.
T.D. 1,110 ft.; S.D.

EDGERLY—CALCASIEU PARISH

Union Sulphur Co.'s No. 2 Hunter, 1,366 ft. N 425 ft. W of SE cor. SW Sec. 21-9s-11w.
Drlg. shale 3,214 ft.

FOUR ISLAND—TERREBONNE PARISH

Texas Co.'s No. 6 State, Four Island.
Dredging canal; temp. abnd.
Texas Co.'s No. 7 State, Four Island.
Dredging canal; temp. abnd.

GARDEN ISLAND—PLAQUEMINES PAR.

Texas Co.'s No. 11 Garden Island, 4,191 ft. S and 1,504 ft. W of NE cor. Sec. 107-23s-32e.
Drlg. rock 1,872 ft.

GUEYDAN—VERMILLION PARISH

Pure Oil Co.'s No. 6, Alliance Trust, 667 ft. E. 1,787 ft. S line of lease, Sec. 34-11s-1w.
Drlg. sand 8,069 ft.

HACKBERRY—CAMERON PARISH

Calcasieu Oil Co.'s No. 2 Hanszen, 400 ft W and 200 ft. S of No. 1 in Sec. 14-12s-10w
T.D. 6,462 ft.; standing.
H. E. Dawton's No. 1 Kaugh.
Derrick.
Gulf Prod. Co.'s No. 14-A Irwin. 300 ft. SE of No. 13-A.
T.D. 6,990 ft.; comp. 679 bbls., ¾-in. choke, T.P. 550 lbs., C.P. 360 lbs.
Wilfred LaHay's No. 1 Roux, Sec. 36-12s-10w.
Shale 3,986 feet.; S. D.
Sutton Oil Co.'s No. 1 Cartier, 2,930 ft. W and 1,220 ft. N of SE cor. of Sec. 23-12s-10w.
T.D. 8,230 ft.; set screen.
Texas Co.'s No. 12-B State, 500 ft. SE of No. 10-B or 1,360 ft. E and 149 ft. S of NE cor. of Sec. 13-12s-10w.
Drlg. gumbo 379 ft.
Union Sulphur Co.'s No. 1 Barbee est., 1,726 ft. N line, 320 ft. E of SW cor. Sec. 12-12s-10w.
T.D. 7,986 ft.; sidetracking shale 6,765 ft.
Union Sulphur Co.'s No. 9 Humble, 300 ft. E and slightly N of No. 1 well, or 330 ft. N and 270 ft. E of the SW cor. of Sec. 12-12s-10w.
T.D. 6,000 ft., salt; P.B. 5,380 ft.; waiting orders 6,003 ft.

NEW IBERIA—IBERIA PARISH

G. D. Spell's No. 1 Sadlator, 25 ft. NW of No. 1 in A. B. Bernard Sur., Sec. 54.
Location.

IOWA—CALCASIEU AND JEFF DAVIS PARISHES

Barnsdall Oil Co.'s No. 2 Caffal.
Drlg. shale 6,839 ft.
Barnsdall Oil Co.'s No. 6 Fontenot, 330 ft. from N and W lines of lease in Sec. 7-9s-6w.
Drlg. sandy lime 6,540 ft.; no report.
Magnolia Pet. Co.'s No. 3 Gillison, 990 ft. W and 200 ft. N of SE cor. of lease in Sec. 12-9s-7w.
T.D. 6,996 ft.; comp. 250 bbls. oil daily.
Magnolia Pet. Co.'s No. 7 Wait.
T.D. 6,935 ft.; drlg. plug.
Shell Pet. Corp.'s No. 2 Ardoin.
T.D. 7,337 ft.; P.B. to 7,020 ft.; D.S. test failed.
Shell Pet. Corp.'s No. 8 Fontenot. 330 ft. out of NE cor. of lease.
Sandy shale 4,985 ft.
Shell Pet. Corp.'s No. 8 Heyd.
T.D. 7,269 ft.; to P.B. to 6,695 ft.; pulling tubing; last 28 joints full cement.
Shell Pet. Corp.'s No. 2 C. L. Johnson, 330 ft. out of SE cor. of 80-ac. lease, and off-set to Magnolia's No. 6 B. T. Wait.
Drlg. hard sand and lime 3,389 ft.
Shell Pet. Corp.'s No. 1 Scott, 330 ft. out of NW cor. of lease.
Drlg. 1,807 ft.
Shell Pet. Corp.'s No. 5 Stratford.
Waiting on derrick.

JENNINGS—ACADIA PARISH

Yount Lee Oil Co.'s No. 14 Housierre-Latrielle, 240 ft. N of No. 13, Sec. 47-9s-2w.
Drlg. shale 2,534 ft.

LAKE BARRE—TERREBONNE PARISH

Texas Co.'s No. 10 L.L.&E., 4,543 ft. S, 503 ft. W of NW cor. Sec. 30-21s-20e.
T.D. 3,690 ft.; S.D.
Texas Co.'s No. 11 L.L.&E., Sec. 30-21s-20e.
Drlg. anhydrite 2,977 ft.
Texas Co.'s No. 24 Lake Barre.
Drlg. lime 3,809 ft.
Texas Co.'s No. 26 Lake Barre, 150 ft. N from No. 22. Sec. 30-21s-20e.
Drlg. salt 1,449 ft.

LAKE PELTO—TERREBONNE PARISH

Texas Co.'s No. 11 Lake Pelto, 1,600 ft. SW of No. 5.
Drlg. shale 5,156 ft.
White one O. & G. Co.'s No. 1 Buckley, 300 ft. S and E of NW cor. SW SW Sec. 35-19s-16e.
T.D. 2,549 ft.; S.D.

LEE-VILLE—LAFOURCHE PARISH

Robert Bowles' No. 1 Crosby.
T.D. 4,525 ft.; P.B. 1,800 ft.; drlg. hard sand 3,006 ft.
Robert Bowles' No. 2 Crosby.
Derrick.
Emerald Pet. Corp.'s No. 4 State of Louisiana.
Drlg. water sand 4,426 ft.
Emerald Pet. Corp.'s No. 7 State of La., 1,078 ft. N of No. 1.
Derrick; temp. abnd.
Emerald Pet. Co.'s No. 8 State of La., 455 ft. N of No. 1.
Rigging up.
Emerald Pet. Co.'s No. 9 State of La., 600 ft. S of No. 1.
Derrick.
Emerald Pet. Co.'s No. 10 State, west bank, 300 ft. S of well No. 1.
Location.
Emerald Pet. Co.'s No. 11 State, east bank, 227 ft. N of well No. 1.
Location.
Emerald Pet. Co.'s No. 12 State, east bank, 250 ft. S of well No. 1.
Location.
Gulf Prod. Co.'s No. 4 Allen Land.
Drlg. hard sandy shale 3,914 ft.
Gulf Prod. Co.'s No. 6 Bernard, 15 ft. N and 85 ft. E of NW cor. of Lot No. 4, Sec. 26-21s-22e.
Drlg. sandy shale 3,083 ft.
Gulf. Ref. Co.'s No. 7 Bernard, 650 ft. E along S line of 5.08-acre tract and 650 ft. from SW cor. of tract and 48 ft. N at right angles.
Derrick.
Frank L. Hill's No. 1 Bernard, 1,422 ft. N and 606 ft. E of SW cor. Sec. 26-21s-22e.
T.D. 2,640 ft.; W.O.C.
Lincoln Oil Co.'s No. 1 Constantine.
Drlg. water sand 4,777 ft.
Lincoln Oil Co.'s No. 1 Vinier. (W.O.).
T.D. 3,878 ft.; comp. 600 bbls. day, ⅝-in. choke.
Texas Co.'s No. 19 L.L.&E., Sec. 27-21s-22e.
Drlg. shale 3,935 ft.
Texas Co.'s No. 20 L.L.&E., Sec. 27-21s-22e
Rigging up.
Texas Co.'s No. 21 L.L.&E.
Location.
Texas Co.'s No. 22 L.L.&E.
T.D. 3,721 ft.; W.O.C.
Texas Co.'s No. 26 L.L.&E.
Drlg. shale 1,500 ft.

LOCKPORT—CALCASIEU PARISH

Magnolia Pet. Co.'s No. 12 Bordages, 966 ft. W and 93 ft. N of SE cor. N½ NE Sec. 8-10s-19w.
Drlg. sand and gravel 187 ft.
Magnolia Pet. Co.'s No. 32 Miller, 925 ft. E, 480 ft. S of NW cor. of S½ of NW of Sec. 9-10s-9w.
T.D. 4,374 ft.; prep. to deepen.
Magnolia Pet. Co.'s No. 34 Miller. Sec. 9-10s-9w.
Drlg. sand 4,389 ft.
Strake Pet. Co.'s No. 1 Moss, 575 ft. S and 70 ft. W of NE cor. of SW NW Sec. 8-10s-9w.
Drlg. shale 3,315 ft.
Union Sulphur Co.'s No. 1 Farquaher, 200 ft. S and W lines, NE cor. SW SE Sec. 36-12s-10w, 2-ac. tract.
T.D. 7,461 ft.; sidetracking water sand 4,642 ft.
Union Sulphur Co.'s No. 6 Moss, between No. 2 and No. 5.
Drlg. shale 6,568 ft.

PORT BARRE—ST. LANDRY PARISH

Gulf Ref. Co.'s No. 6 Wilson-Cochran.
Sand 3,049 ft.; fishing.
Phillips Pet. Co.'s No. 1 Sibille, 3,063 ft. S from R.R. along W line of Sibille Co., Inc., 180-acre tract and 50 ft. E in Sec. 7-6s-6e.
Moving in.
Texas Co.'s No. 21 Botney Bay, 2,400 ft. S, 8 deg. W of most southerly NE cor. of Botney Bay 562-ac. tract, thence 600 ft. N, 82 deg. W. at R/A.
Drlg. shale 1,227 ft.

SORRENTO—ASCENSION PARISH

Union Sulphur Co.'s No. 26 United Land.
Drlg. shale 5,698 ft.

SULPHUR—CALCASIEU PARISH

Union Sulphur Co.'s No. 776 fee.
T.D. 4,892 ft.; P.B. 4,548 ft.; W.O.C.
Union Sulphur Co.'s No. 788 fee, 602 ft. S 1,209 ft. W of C Sec. 29-9s-10w.
Drlg. shale 5,421 ft.
Union Sulphur Co.'s No. 794 fee.
Drlg. shale 5,156 ft.
Union Sulphur Co.'s No. 795 fee.
Drlg. shale 2,192 ft.
Union Sulphur Co.'s No. 796 fee.
T.D. 1,736 ft.; W.O.C.
Union Sulphur Co.'s No. 797 fee, 1,682 ft W. 418 ft. N of C of Sec. 29-9s-10w.
Drlg. sand 3,480 ft.
Union Sulphur Co.'s No. 798 fee. 673 ft. N. 575 ft. W of C Sec. 29-9s-10w.
T.D. 3,148 ft.; comp. 500 bbls. day, ¼-in. choke.

SWEET LAKE—CAMERON PARISH

Pure Oil Co.'s No. 12 Yount Lee fee, 800 ft. S of No. 11, in line with Nos. 9 and 10, Sec. 12-13-3w.
T.D. 7,439 ft.; prep. to start up.

VINTON—CALCASIEU PARISH

Gulf Ref. Co.'s No. 9 Gardner, 572 ft. E and 159 ft. N from SW cor. of SW SE Sec. 33-10s-12w.
T.D. 3,330 ft.; prep. to put on pump.
Gulf Ref. Co.'s No. 72 G. N. G., 643 ft. E, 50 ft. S. NW cor. NE SE Sec. 33-10s-12w.
T.D. 3,170 ft.; sanded up; standing.
Tri-Oil Co.'s No. 1 Matilda Gray, 38 ft. W, 35 ft. N of SE cor. NE SW NE Sec. 33-9s-12w.
Drlg. gumbo 3,566 ft.
Vinton Oil Co.'s No. 1 J. G. Gray, 230 ft. from N line and 545 ft. from E line of SE NE Sec. 4-11s-12w.
Derrick.
Vinton Pet. Co.'s No. 2 Mathilda Gray, 100 ft. N of No. 1 and in Sec. 33-10s-12w. (W.O.); T.D. 3,226 ft.; W.O.C.
Wilson Broach's No. 5 Wilson.
T.D. 3,277 ft.; comp. 25 bbls. day.

WHITE CASTLE—IBERVILLE PARISH

Shell Pet. Corp.'s No. 9 Wilburn.
Drlg. sticky shale 3,138 ft.

MISCELLANEOUS WILDCATS

TEXAS

ANGELINA COUNTY

Thayer et al's No. 1 Dearmond, J. T. Peavy Sur., 2½ miles SE of Zavalla.
Hard lime 1,915 ft.; T.D.; F.A.

AUSTIN COUNTY

I.T.I.O. and Johnson Bros.' No. 1 August Wrangler, 450 ft. out of N cor. of Wrangler 132-ac. tract in Adam Kuykendall Sur. Set 10-in. surface csg. 507 fet.; drlg. 700 ft.

BRAZORIA COUNTY

Amerada Pet. Corp.'s No. 1 Houston Farm Dev. Co., 1,414 ft. N, 316 ft. W of SE cor. of L. Bachelder Sur.
T.D. 5,415 ft.; cleaning up and rebuilding after storm.
C. & R. Dev. Co.'s No. 1 National Life Co., 340 ft. from W line and 340 ft. from N line of 100-ac. tract out of west end Nos. 3 and 4 in Henry Austin League No. 4, Abst. No. 13.
Rigged up; S.D.
Jack Clark tr.'s No. 1 J. M. Spear, 150 ft. from N line and 150 ft. from W line of Lot 4, in Pinckney Sur.
T.D. 5,009 ft.; sand and lime; S.D.
Danciger O. & R. Co.'s No. 3 Hunt, skidded 200 ft. SW of No. 3-A in W. C. Carson Sur.
Drlg. shale and lime 4,284 ft.
Danciger Oil & Ref. Co.'s No. 1 Stark-Brown 330 ft. out of most easterly NE cor. of lease in Perry & Austin Sur.
T.D. 6,935 ft., hard green shale; S.D.
Hillock Pet. Co.'s No. 1 Frank Trukus, 200 ft. from S and 1,000 ft. from E lines of 75-ac. tract, Sec. 7, H.T.&B.R.R. Sur.
Rigged up and S.D.
Harrison & Abercrombie's No. 1 Bernard River Land, 1,000 ft. each way out of SE cor. of Lot No. 23.
Rigging up.
Holt et al's No. 1 Griffith, J. B. Bailey Sur.
T.D. 4,200 ft.; waiting orders.

BRAZOS COUNTY

M. S. Broach's No. 1 Buck Wallace, 1,000 ft. from S line, 400 ft. from W line of 251-ac. tract in G. W. Singleton Sur.
T.D. 369 ft.; S.D.

BURLESON COUNTY

Bear Pond Oil Co.'s No. 1 J. H. Coulter, 9,400 ft. from SW line and 2,200 ft. from NW line of 1,176-ac. tract in SE cor. of county in A. Kennon Sur.
T.D. 500 ft.; W.O.C.

CALHOUN COUNTY

Continental Oil Co.'s No. 1 American Nat. Realty Co., C of NE of Sec. 6, Blk. C.
T.D. 5,787 ft.; stuck drill stem.
Herman Heep's No. 3 Welder.
Derrick.
J. H. Meek et al's No. 1 R. Adamans, C of NW line of Sec. 45, 2½ miles NE of McCamey.
Spud.

CHAMBERS COUNTY

Turnbull & Irwin's No. 1 Sudindorf, center of W line of 483-ac. tract, H.&T.C. Sur. No. 67, due E of Anahuac.
Drlg. sandy shale 4,370 ft.

COLORADO COUNTY

Coyle-Concord Oil Co.'s No. 1 Nelson, 3,300 ft. SE of NW cor. of Sec., 2,200 ft. SW at right angles in I.&G.N. Sur.
T.D. 4,052 ft.; R.U. and S.D.
Quintana Pet. Co.'s No. 1 M. A. Olmstead, 457 ft. N 66 deg. 20 ft. E along S line from SW cor. of 129-ac. tract and 425 ft. NW at right angles in M. Baton Sur.
Drlg. sandy shale 3,510 ft.

FAYETTE COUNTY

Colorado Oil Co.'s No. 1 Anders.
T.D. 2,820 ft.; S.D.

FORT BEND COUNTY

Gem Oil Co.'s No. 1 Farmer, 330 ft. out of NE cor. of Robt. Hodges Sur., on 200-ac. tract.
T.D. 6,008 ft.; abnd.
J. E. Seiber's No. 1 J. B. Farmer, 150 ft. out of most southerly cor. of 50-ac. tract in Jas. Scott Sur.
T.D. 4,428 ft.; comp. 660 bbls. day, ⅝-in. choke, T.P. 350 lbs., C.P. 1,075 lbs.
W. A. Shafer et al's No. 1 V. B. Bortash, 693 ft. SW of NE line and 1,003 ft. NW of SE line of Sec. 52, H.&T.C. Sur.
T.D. 300 ft.; S.D.
Vico Oil Co.'s No. 1 H. R. Darst, 5,690 ft. N of S line and 685 ft. W of E line of E. Powell Sur.
Derrick.
Wilks et al's No. 1 Norris, 300 ft. W and 1,352 ft. S of N cor. of 525-ac. tract (5 miles S of Needville).
Rigged up and S.D.

GALVESTON COUNTY

George K. Spoor's No. 1 Maco Stewart, 1,626 ft. N of SE cor. of Alex Farmer Sur., and 1,175 ft. E in W. K. Wilson Sur. (4 miles S of Dickinson).
T.D. 6,577 ft.; temp. abnd.
Humble O. & R. Co.'s No. 1 Maco Stewart, C of E and W lines of 400-ac. tract in John Sellars Sur., S. of Dickinson Bayou 3 miles N of Spoor well.
Drlg. clay 7,864 ft.; Frio sand 7,739-7,809 ft., show gas.

GRIMES COUNTY

Dr. Marshall et al's No. 1-B Todd, 300 ft. from E line and 175 ft. from N line of 159-ac. tract in extreme NW cor. of county (25 ft. N of No. 1).
Laying water line.
W. D. Roan et al's No. 1 D. C. Kelly, 1,532 ft. from N line and 168 ft. from E line of U. Sanders Sur., near Carlos.
Drlg. shale and lime 1,440 ft.
J. H. Woodward et al's No. 1 O. A. Hamilton, center of Hamilton 95.5-ac. tract S of Richards in the O. Hill Sur.
Coring 3,290 ft.

HARDIN COUNTY

Wilcox O. & G. Co.'s No. 1 Sternberger, 1,328 ft. N of S line and 1,311 ft. W of E line of C. Dorsey Sur. No. 1.
T.D. 6,000 ft.; S.D.

HARRIS COUNTY

C. C. Foster and others' No. 1 H. K. Johnson, 2,000 ft. from S line and center of E and W lines of G.C.&S.F. Sur.
Spud and drlg. water well.
General Crude Oil Co.'s No. 1 Borick est., 5,606 ft. S of N line of survey and 1,546 ft. W of E line of 1,426-ac. tract in John C. Ogburn Sur.
Drlg. sandy shale 4,700 ft.
H. H. Givans' No. 1 F. B. Bender, 2,640 ft. from S line and 4,860 ft. from E line of Geo. Fisher Sur.
T.D. 335 ft.; abnd.
Imperator Oil Co.'s No. 1 Brooks est., 7,400 ft. S and W of NE cor. of R. & R. Vince Sur.
Drlg. water well.
Loring Oil Co.'s No. 1 Westmoreland, Lot 3, Blk. 33, Westmoreland Add.
Drlg. 6,730 ft.
W. U. Paul's No. 1 E. M. House, 2,200 ft. N and 1,000 ft. E of NE cor. of E. Benson Sur. in M. Magruder Sur.
Set 10-in. at 1,000 ft.; S.D.
Southland Oil Co.'s No. 1 Galvey, SE cor. Sec. 4, Blk. 1, H.&T.C. Sur.
Drlg. 4,735 ft.
Texas-New York Dev. Co.'s No. 1 Ralson, 525 ft. from W line and 325 ft. from S line of Lot No. 12 in J. W. Moody Sur.
T.D. 1,538 ft.; W.O.C.

JACKSON COUNTY

Encio Gas Co.'s No. 1 J. H. Drummond, 330 ft. out of most easterly NE cor. of Drummond 499-ac. tract.
Coring 5,675 ft.
Encio Gas Co.'s No. 1 Seidel & Simmons, 150 ft. from SW line or 300 ft. NE at right angles from No. 1 Toney, in Raymond Musquiz Sur.
Coring 6,009 ft.
Imperator Oil Co.'s No. 1 Dutton, S center of Lot No. 11, Blk. 25, 450 ft. S of R.R. and 1,350 ft. W line of townsite, Ray Muskins Sur.
Rigged up and S.D.
Phillips Pet. Co.'s No. 1 State Realty, 1,000 ft. SW and 466 ft. NW of most easterly E cor. of Vanderbilt townsite, in Blk. 95, R. Muskuiz Sur.
T.D. 1,151 ft.; W.O.C.
Turman Oil Co.'s No. 1 T. H. Miller, 150 ft. each way out of E 50 acres of Miller 100-ac. tract in Ray Musquiz Sur.
Location.

JEFFERSON COUNTY

Gulf Prod. Co.'s No. 3 L. W. Junker, 700 ft. W, 350 ft. S of NE cor. of 260-ac. tract in W. H. Smith League.
Drlg. hard sand rock 4,573 ft.
Magnolia Pet. Co.'s No. 1 E. Herbert Trust, 990 ft. N, 330 ft. E of SW cor. of P. H. Bell Sur. No. 2.
Rigging up.
Sun Oil Co.'s No. 1 H. Long, 1,500 ft. N line, 990 ft. E line of lease.
Drlg. shale 3,085 ft.
Turnbull & Irwin's No. 1 Tolivar, 1,900 ft. from N line and 1,400 ft. from W line of NW cor. of Shadric Morris Sur.
Drlg. 2,400 ft.

LIBERTY COUNTY

R. M. Bruner et al's No. 1 N. Bell, 150 ft. from N line and 150 ft. from W line of Bell's 187-ac. tract, H.&T.B. Sur. No. 4.
Rigging up.
Extension Oil Co.'s No. 1 J. A. Lovett, 200 ft. from E and 600 ft. from S line of lease, P. P. Deevers Sur.
Drlg. gumbo 2,915 ft.
Liberty-Independent Oil Co.'s No. 1 J. M. Neal, 3,550 varas from E line and 500 varas from N line of Samuel Strong Sur.
Drlg. shale 2,700 ft.; no report.
Magnolia Pet. Co.'s No. 1 Maco Stewart, 2,600 ft. E and 1,370 ft. S of NW cor. of 350-ac. tract in A. Cherry Sur.
Rigging up.
A. L. Maxwell's No. 1 M. D. Hinchliff, 300 ft. from E line and 1,000 ft. from N line of H.&T.C. Sur. No. 150.
Location.
Thomas et al's No. 1-A Eicke, 660 ft. from W line and 2,350 ft. from S line of tract in Green Sur.
T.D. 5,158 ft.; fishing.

MATAGORDA COUNTY

Continental Oil Co.'s No. 1 Robbins.
Drlg. shale 5,550 ft.
Dr. Griffith's No. 1 fee, 3,000 ft. from N line and 3,000 ft. from W line of Wm. E Bell Sur.
Rigged up and drlg. water well.
United North & South Dev. Co.'s No. 1 Unit 4, Buckeye farm, J. C. Keller league, 214 ft. N line and 202 ft. E line of lease.
T.D. 7,850 ft.; S.D.
United North & South Dev. Co.'s No. 1 Unit No. 58, 250 ft. N and 200 ft. W of SE cor of Unit No. 58.
S.D. 1,546 ft.

MONTGOMERY COUNTY

Baker et al's No. 1 Benker, D. James Sur. Whipstocked and drilled to 4,750 ft.; D.S. test in 10 min.; built up 50 lbs. pressure and showed 1 joint oil and mud and 30 thribbles S.W.; S.D. for orders 4,948 ft.
Brown & Wheeler et al's No. 1 Jones, 440 ft. out of NW cor. of S 175 acres of 350-ac. tract.
Location.
Humble O. & R. Co.'s No. 1 Anna M. Platte, 466 ft. S and 1,100 ft. W of NE cor. of 100-ac. tract in Wm. Barker Sur.
Coring shale 6,090 ft.
Sayre Oil Co.'s No. 1 Delta Land & Lbr. Co., 330 ft. out of NE cor. of J. Truitt Sur.
T.D. 3,350 ft.; S.D.
Shell Pet. Corp.'s No. 1 Crighton, 1,480 ft. W and 290 ft. S of NE cor. of lease in Mary Corner Sur.
Drlg. shale and lime 2,227 ft.

ORANGE COUNTY

Blue Line Oil Co.'s No. 1 Godwin, Richard Ballew Sur., 300 ft. from E line and 150 ft. from NE line of Godwin 20-ac. tract.
Drlg. shale 2,610 ft.
Texas Louisiana Oil Co.'s No. 1 Starks, 2,450 ft. N of NW cor. M. Delano Sur. 68, 10.-500 ft. E at R/A.
T.D. 5,055 ft.; S.D.

POLK COUNTY

Howard Dailey et al's No. 1 Z. B. Knox, 1,450 ft. W and 1,920 ft. S of NE cor. of F. Chairs Sur., 1½ mile NE of Corrigan.
Spud and S.D.

REFUGIO COUNTY

Heard-Holland Oil Co.'s No. 1 Peck, 366 ft. N and W out of NW and SW of Bonnie View Subd.
T.D. 5,351 ft.; D.S. test 5,330-37 ft., 11 mins., 400 lbs. pressure, ¼-in. choke top and 5/16-in choke on bottom; D.S. test 5,337-51 ft. showed 220 lbs. pressure 11 mins., and 100 ft. mud cut with gasoline and some fresh wtr.; prep. to set 7⅝-in. csg. at 5,348 ft.; washing to bottom.
Quintana Oil Co.'s No. 2-A O'Connor, 450 ft. N and 450 ft. W of No. 1.
Spud.

Quintana Oil Co.'s No. 1-B O'Connor, 139 ft. E line and 2,525 ft. S line of B.B.B.&C. Sur., Abst. 96.
Drig. shale 3,500 ft.

SAN AUGUSTINE COUNTY

Fidelity Exploration Co.'s No. 1 Bryan & Flournoy, 1,926 ft. from N and 725 ft. from E lines of Sec. 14, S.P.R.R. Sur.
T.D. 2,005 ft.; S.D.; moving in heavy rig to drill to Woodbine.

SAN JACINTO COUNTY

Darby Jones' No. 1 McRee.
Sand and shale 2,017 ft.; S.D.

TYLER COUNTY

Boone-Wallace & Lane's No. 1 Cruse.
Drig. shale 2,586 ft.

VICTORIA COUNTY

American Liberty Oil Co.'s No. 1 Gaugler, SE cor. of Gaugler 265-ac. tract and just N of Petrol Corp.'s No. 1 Machalec.
Location.

American Liberty Oil Co.'s No. 1 Prybil, 330 ft. out of SE cor. of Prybil 122-ac. tr.
T.D. 2,149 ft.; show gas.

John F. Camp's No. 1 Zimmer, 330 ft. from SE and NE lines of SW of 58.5-ac. tract of Zimmer 117-ac. lease in R. Manchola Sur.
T.D. 2,209 ft.; D.S. test 2,200-09 ft., 12 min., 5/16-in. choke, 2 thribbles oil, 225 lbs. pressure; running csg.

Feltex et al's No. 1 Herman Dietzel, 180 ft. from NW line and 330 ft. from SW line of 80-ac. tract in Manchola Sur.
T.D. 3,600 ft.; abnd.

Gulf Prod. Co.'s No. 6 Keeran, begin at intersection of R.R. and SW line of survey, thence NE along R.R. 6,257 ft., thence NW at r/a 2,539 ft. in the W. DeLeon Sur.
Drig. sticky shale 5,093 ft.

Humble O. & R. Co.'s No. 1 McFadden est., 2,000 ft. S. 15 deg. W of Lion O. & R. Co.'s No. 1 McFadden in C. O. Edwards Sur.
Drig. sand 4,880 ft.

Humble O. & R. Co.'s No. 2 Mitchell, 6,500 ft. NW line, 7,000 ft. from SW line of Mitchell 5,000-ac. tract.
Drig. shale 4,687 ft.

Nutex Oil Co.'s No. 1 Zimmer, 330 ft. out of SW cor. of E½ of John Zimmer 120-ac. tract.
T.D. 2,209 ft.; no gauge.

Albert Plummer's No. 1 Zimmer, 330 ft. NE and SE lines of lease in Manchola Sur.
Derrick.

Quintana Oil Co.'s No. 1 McCormic, 500 ft. SW line, 500 ft. NW line of survey in most westerly NW cor. S.A.&M.G. Sur. No. 3.
T.D. 6,150 ft.; temp. abnd.

Texas Co.'s No. 2 McFaddin, 9,150 ft. S and 200 ft. E at right angles out of NW cor. of C. M. B. Hoyt Sur.
Drig. sticky shale 4,535 ft.

Texas Co.'s No. 1 J. B. Midgett, N 35 deg. W 1,000 ft. and S 55 deg. W 1,000 ft. from SE cor. of lease in T.&N.O. Sur., Sec. 14. Moving in.

WHARTON COUNTY

Pure Oil Co.'s No. 3 Chas. T. Kountze, 2,310 ft. at R/A from NW line and 990 ft. at R/A from SW line of 280-ac. tract in Morris & Cummings Sur., No. 19.
Coring 5,145 ft.

Pure Oil Co.'s No. 2 Stewart, Morris & Cummings Sur., Sec. 35, 990 ft. out of SW cor. of 160 acres.
T.D. 8,236 ft.; fshg.

Pure Oil Co.'s No. 1 J. S. Stidhan, 433 ft. SW and 1,320 ft. SE of N cor. of Stidhan 160-ac. tract in Morris & Cummings Sur. No. 23.
Drig. 4,826 ft.

Texas Gulf Prod. Co.'s No. 1 Kresta, 440 ft. N and E from SW cor. of tract in Sec. 54, W. B. Ivey Sur.
Drig. shale 1,408 ft.

SOUTH LOUISIANA

ACADIA PARISH

Edwards Drig. Co.'s No. 1 Daigle, NE cor. of SE of Sec. 24-7s-1e.
Coring shale 7,244 ft.

ALLEN PARISH

Humble O. & R. Co.'s No. 1 Industrial Lumber Co., 1,220 ft. W line and 2,440 ft. S line Sec. 21-3s-5w.
Bldg. derrick.

BEAUREGARD PARISH

Federal Pet. Co.'s No. 1 Lutcher-Moore, 467 ft. S and 467 ft. E of the NW cor. of Sec. 4-6-12.
Drig. sand 3,560 ft.

Federal Pet. Co.'s No. 1-B Lutcher-Moore, 6 miles NW of No. 1 Lutcher-Moore and near Fields.
Drig. gumbo 3,515 ft.

CALCASIEU PARISH

Fred Oil Co.'s No. 1 Faust, 566 ft. N, 300 ft. W of SE cor. of NW of SE Sec. 26-8s-10w.
T.D. 2,875 ft.; fishing.

Steinberger Inv. Co.'s No. 1 Drew, 330 ft. out of NW cor. of NE¼ of Sec. 36-10s-11w. 4½ miles SW of Sulphur.
Location.

Union Sulphur Co.'s No. 2 Barbe, 379 ft. S and 350 ft. W of NE cor of SE of Sec. 11-9s-3w.
Drig. water sand 7,004 ft.

CAMERON PARISH

Southern Sulphur Oil Corp.'s No. 1 Gulf of Mexico, near the mouth of the Calcasieu River.
T.D. 3,300 ft.; abnd.

IBERIA PARISH

Diamond Corp.'s No. 1 Edmond Victor, 1,908 ft. E and 450 ft. from SW cor. of Sec. 41-12s-5e.
Derrick.

Y. D. Spell's No. 1 Sabiater, 35 ft. NW of No. 1 A. B. Bernard, Sec. 4-12s-7e.
Drig. rock 2,646 ft.

IBERVILLE PARISH

Gross Pet.'s No. 1 Angelloz.
T.D. 2,270 ft.; W.O.C.

JEFFERSON DAVIS PARISH

Humble O. & R. Co.'s No. 3 Devillbiss, 1,320 ft. W, 446 ft. S of NE cor. Sec. 14-9s-4w
Drig. sand 7,358 ft.

Humble O. & R. Co.'s No. 1 Martin Kratzer, 400 ft. out of SE cor. 120-ac. tract, Sec. 14-9s-4w
Drig. shale and lime 6,470 ft.

Shell Pet. Corp.'s No. 1 Jernigan, 330 ft. E. 660 ft. S NW cor. Sec. 12-9s-4w.
Drig. brittle shale 7,845 ft.

Tide Water Oil Co.'s No. 1 Mrs. A. Bourgeois, 250 ft. E and 295 ft. S of C of Sec. 28-9s-5w.
T.D. 6,107 ft.; P.R. 5,100 ft. to test sand 5,292-5,325 ft.; S.D. orders.

LAFOURCHE PARISH

Barnsdall Oil Co.'s No. 3 Harang Plantation, Rigging up.

R. L. Gay, trustee's No. 1 Godchaux, 3,920 ft. N and 1,746 ft. E in common cor. of Lots 24 and 26, Twp. 15s-19e.
T.D. 5,618 ft.; S.D.

Southern Sulphur Corp.'s No. 1 D. L. Lagrange, 800 ft. E of NW cor. of Lot 7, thence 250 ft. S of Sec. 26-21s-22e.
Spudded and S.D.

PLAQUEMINES PARISH

Southern Sulphur Co.'s No. 1 Bay Adams, 2,325 ft. W and 826 ft. S of NE cor. of Sec. 22-20s-28e.
T.D. 725 ft.; abnd.

Vermilion Corp.'s No. 1 Burras.
Drig. shale 1,386 ft.

RAPIDES PARISH

C. D. Loe's No. 1 Barrett, 330 ft. NW of SE line and 330 ft. NE of SW line of Sec. 40-5n-1w.
Rigging up.

ST. BERNARD PARISH

Danciger's No. 1 Battles, 526 ft. N, 2,193 ft. W of SE cor. Sec. 135-14s-14e.
T.D. 42 ft.; W.O.C.

Joe Danciger's No. 1 Delacroix Land Fur. Co., 2,442 ft. W and 660 ft. N of SE cor. of Sec. 127-14s-14e.
Location.

Southern Sulphur Oil Co.'s No. 1 State-Lake Borgue, 350 ft. N and 230 ft. E of SE cor. of Sec. 33-12s-15e.
Drig. sand and shale 2,722 ft.; (no report).

Southern Sulphur Corp.'s No. 1 Lake Lery, 400 ft. W, 500 ft. N, SW cor. Sec. 28-13s-15e.
Shale 2,751 ft.; no report.

ST. LANDRY PARISH

Bailey Gaunce's No. 1 Lewis, 300 ft. N and E of SW cor. of NW of NE of Sec. 29-5s-6e (workover).
T.D. 5,017 ft.; S.D.

ST. MARTIN PARISH

Texas Co.'s No. 6 St. Martin Land Co., 660 ft. S and 500 ft. W of NE cor. SE Sec. 17-9s-7
Drig. shale 7,800 ft.

ST. MARY'S PARISH

Black et al and Edwards Drig. Co.'s No. 1 Chetimanchа, Sec. 34-13s-9e, 219-ac. tract approximately 500 ft. at right angles SE and SW lines of tract.
T.D. 6,501 ft.; S.D.

TERREBONNE PARISH

Texas Co.'s No. 3 School Board, 2,630 ft. S and 1,334 ft. E of NW cor. of Sec. 16-22s-16w
Temp. abnd.

VERMILION PARISH

Moore Bros.' No. 1 Brussard, 350 ft. S of N line, 250 ft. E of W line, NE cor. Sec. 32-11s-3e
Drig. sand 2,435 ft.

VERNON PARISH

Robt. K. Williams Jr.'s No. 1 Llano Del Rio, 1,185 ft. S, 1,000 ft. W of NE cor. Sec. 7-1n-9w
Rigged up and S.D.; temp. abnd.

La.-Ark. Wildcats

(Continued from Page 40)

A. D. Mytller's No. 1 La. Delta Pecan Co., 1,700 ft. N, 160 ft. E, SW cor. Sec. 37-13-11.
[illegible] ft.

Oynett et al's No. 1 Thomas, 330 ft. S and E. C Sec. 34-13-8.
S.D. for fuel 740 ft.

W. K. Williams' No. 1 DeMoss Est., 900 ft. S. 330 ft. W. NE cor. Sec. 33-13-11.
Tested show oil and S.W. 2,468 ft.

SABINE PARISH

R. B. Campbell et al's No. 1 Cook Land Co., 150 ft. N, 300 ft. W, SE cor. NW NW Sec. 35-10-12.
W.O. csg. 1,586 ft.

G. H. Collins' No. 1 Bellieu & Carter, 330 ft. S and W, NE cor. NW SW Sec. 21-9-12.
Tested show oil; W.O. 2,070 ft.

De Generes et al's No. 3 Crawford, 330 ft. N and E. SW cor. NW NE Sec. 20-9-13.
Tested S.O.; S.D. 1,690 ft.

Graham & Dalton's No. 1 Burkett, 330 ft. N and W of C Sec. 16-9-13.
Used acid 1,993 ft.

Earl P. Halliburton's No. 1 Paul, 330 ft. S and E. NW cor SW SW Sec. 21-9-13.
Dry and abnd. 1,577 ft.; old T.D. 2,070 ft.

Helena Oil & Gas Co.'s No. 1 Heard, 330 ft. S and W NE cor. NW NE.
Set 10-in. 74 ft.; set 6-in. 1,561 ft.

Laurel Pet. Co.'s No. 6 Frost Ind., Sec. 20-9-13.
Comp. flowing 28 bbls. 1,593 ft.

Laurel Pet. Co.'s No. 7 Frost Ind., Sec. 20-9-13.
Rigging up.

Zan Lloyd's No. 1 Henderson, 330 ft. N and W, C Sec. 29-9-13.
W.O.S.R. 2,031 ft.

Dr. O. B. Hicks' No. 1 Neal, SE SW SE Sec. 15-9-12.
Set 10-in. 40 ft.

Geo. L. Pace's No. 2 DeSoto Corp., 1,080 ft. S. 990 ft. W. NE cor. SE Sec. 27-10-13.
Reaming 3,223 ft.

W. H. Howe et al's No. 1 Craig, 330 ft. S and E of C Sec. 32-9-13.
S.D. 1,390 ft.

J. A. Stinson's No. 1 Whitney Corp., 330 ft. S and W, NE cor. Sec. 6-9-13.
W.O.S.R. 2,014 ft.

Valley-Osage Oil Co.'s No. 1 Burkett, 330 ft. S and W NE cor. SW NE Sec. 10-8-13.
W.O.S.R. 1,963 f..

Victory Pet. Co.'s No. 1 Bank of P. H., 330 ft. N and E SW cor. NE NE Sec. 29-9-13.
Set 10-in. 41 ft.; drlg. 350 ft.

RAPIDES PARISH

Ben Banner's No. 1 Bentley Lbr. Co., 2,640 ft. E. NW cor. Sec. 11-4n-5w.
S.D. for water 3,200 ft.

Evans & Collingsworth's No. 1 Hickman, 330 ft. S and E. NW cor. Sec. 40-4-1e.
S.D. 2,130 ft.

C. D. Loe, Trustee's No. 1 Baird Est., SE cor. Sec. 40-5n-1w.
Rigging up.

WEBSTER PARISH

Abney Oil Corp.'s No. 3 Slack, 660 ft. N, 575 ft. W. SE cor. NE SE Sec. 34-22-11
Set 7-in. 2,699 ft.

Gulf Ref. Co.'s No. 1-A T. Crichton, est. 330 ft. S and W, C Sec. 15-18-9.
Rigging up.

ARKANSAS

CALHOUN COUNTY

R. J. McMurray et al's No. 1 Calion Lbr. Co., 330 ft. N and E SW cor SW NE.
Rigging up.

CONWAY COUNTY

Sou. Union Gas Co.'s No. 1 Feldman, C SW SW Sec. 6-5n-17w.
S.D. 3,100 ft.

HEMPSTEAD COUNTY

Ark. Drig. Co.'s No. 1 Jones, 1,000 ft. S, 400 ft. W. NE SE Sec. 11-14-24.
Set 10-in. 160 ft.

E. A. Austin's No. 1 McWilliams, 300 ft. N and W of SE cor. NW SW Sec. 19-13-23.
S.D. 700 ft.

A. H. Bagnelle's No. 1 Trattner & Rhinehart, Sec. 2-13-26
S.D. 1,992 ft.

F. W. Martin & Co.'s No. 1 Lafferty, 500 ft. N and W SE cor. NW Sec. 17-14-24.
Rigging up.

LAFAYETTE COUNTY

Benedum & Trees' No. 1 Bodcaw Lbr. Co., C NE NE Sec. 19-16-23.
Rigging up.

Douglas Lawn's No. 1 Camp, 330 ft. S and W NE cor. SW SE Sec. 14-15-23.
S.D. 2,410 ft.

Earl F. Fox's No. 1 Coleman Bros., 330 ft. N and W SE cor. NW NE Sec. 26-16-25.
S.D. 2,258 ft.

LEE COUNTY

Ark.-La. P. L. Co.'s No. 1 McDonald, 1,500 ft. N. 370 ft. E. SW cor. Sec. 28-1n-4e.
S.D. for water 2,610 ft.

MILLER COUNTY

Duluth-Ark. Oil Co.'s No. 3 Beck, SW cor. SE SW Sec. 34-15-26.
Set 10-in. 200 ft.; drlg. 1,520 ft.

Fitzwater et al's No. 1 Norson, SW cor. SE SW Sec. 20-15-27.
S.D. 2,177 ft.

King Oil Corp.'s No. 1 C. H. Schroder, 200 ft. N, 330 ft. E. SW cor. SW NE Sec. 24-14-28.
Washing to bottom 2,009 ft.

W. F. Lacey's No. 1 Gibson, 330 ft. S and E. NW cor. SW NW Sec. 30-19-27.
S.D. 2,808 ft.

Oil Well Oil Corp.'s No. 1 Dodd, 300 ft. S. 200 ft. E. NW cor. SW NE Sec. 19-19-28.
S.D. 52 ft.

Texarkana Oil Corp.'s No. 3 E. H. Beck, 330 ft. S and W NE cor. SE SE Sec. 33-15-26.
W.O. csg. 2,927 ft.

Lee Timberlake et al's No. 1 E. L. Beck, 150 ft. N and E. SW cor. NW SE Sec. 33-15-26.
Dry and abnd. 2,967 ft.

John Wrather's No. 1 Olivet, 309 ft. S, 150 ft. E. NW cor. NE
Comp. pumping 30 bbls. 2,937 ft.

John Wrather's No. 1 Beck, SW cor. SW SE Section 34-15-26.
Drig. 2,250 ft.

OUACHITA COUNTY

F. A. Book et al's No. 1 Arnold, Sec. 24-15-16.
S.D. 2,032 ft.

J. D. Reynolds' No. 1 Guttry, 462 ft. S, 150 ft. W. NE cor. NE SW Sec. 21-15-19.
W.O.S.R. 1,506 ft.

UNION COUNTY

Alexander-Head Oil Co.'s No. 1 Union Saw Mill Co., 330 ft. S and E. NW cor. SW SW Sec. 28-19-13.
Drig. 2,600 ft.

Mrs. R. K. Jones et al's No. 1 J. Davis, 330 ft. N and W, SE cor. NW NW Sec. 33-16-14.
Arrng. to test 2,764 ft.

McCrea-Penn Oil Co.'s No. 1 Union Saw Mill Co., 330 ft. N and W, SE cor. NE NW Sec. 3-18-13.
Set 7-in. 2,573 ft.

Marine Oil Co.'s No. 1 Parker, 330 ft. N and E SW cor. NE NW Sec. 2-18-13.
Set 10-in. 135 ft.; drlg. 1,600 ft.

Marine Oil Co.'s No. 2-B Union Saw Mill Co., 330 ft. N and E, SW cor. SW NW.
W.O.S.R. 3,590 ft.

Tubal Pet. Co.'s No. 1 Gaddy, 340 ft. N and E. SW cor. SE NW Sec. 14-17-14.
S.D.; W.O. 2,416 ft.

MISSISSIPPI

AMITE COUNTY

Mineral Resources, Inc.'s No. 1 Anderson, C NE NW Sec. 14-3n-3e.
S.D. 550 ft.

CLARKE COUNTY

Clarke County C. & G. Co.'s No. 1 Kirkland, 1,320 ft. S. 660 ft. E NW cor. Sec. 10-3n-16e.
Set 13⅜-in. 123 ft.

HINDS COUNTY

Alexander & Weaver's No. 1 Mayer & Gordon, 552 ft. W, 217 ft. S NW cor. NE Sec. 26-6n-1e.
Rigging up.

Atkins & Hightower's No. 1 Sanders, 200 ft. S and E NW cor. SW Sec. 30-6n-2e.
Location.

ISSAQUENA COUNTY

Pelican Oil & Gasoline Co.'s No. 1 Steel Bayou Corp., 400 ft. N, 350 ft. E. SW cor. NW Sec. 14-12n-2w.
Junked and abnd.

JONES COUNTY

Snow-Black Pet. Co.'s No. 2 Watson, 520 ft. W, 200 ft. S, C Sec. 24-7n-13w.
S.D. 2,550 ft.

RANKIN COUNTY

Love Pet. Co.'s No. 1 Pearl River Lbr. Co., Sec. 15-6n-2e.
Set 15-in. 41 ft.; set 10-in. 360 ft.; drlg. 3,500 ft.

SIMPSON COUNTY

Berry Corp.'s No. 2 R. T. Berry, Sec. 33-2n-4e.
Set 7-in. 2,048 ft.

WALTHALL COUNTY

Mutual O. & G. Co.'s No. 1 Boyd, SW cor. SW SE Sec. 34-2n-9e.
Moving in rig.

WARREN COUNTY

Orbet Drig. Co.'s No. 1 R. L. Parker, 330 ft. E. CWL Sec. 14-14-1e.
S.D. 3,148 ft.

WASHINGTON COUNTY

Perkins & Dees' No. 1 Lee, 1,500 ft. E. 660 ft. N. SW cor. Sec. 33-15n-8w.
Set 10-in. 300 ft. and S.D. (corrected).

La.-Ark. Proven Fields

NORTH LOUISIANA

CADDO—ROSSTON

Bayou State O. & G. Co.'s No. 1 Connell, 1,900 ft. N, 1,193 ft. E, SW cor. Sec. 15-21-14.
W.O.S.R. 964 ft.

Shore Line Oil Co.'s No. 42 Crystal, Sec. 13-21-16.
Set 10-in. 41 ft.; set 6-in. 1,038 ft.; drlg. 1,041 ft.

Shore Line Oil Co.'s No. 43 Crystal, Sec. 13-21-16.
Set 10-in. 42 ft.; set 6-in. 1,036 ft.

Shore Line Oil Corp.'s No. 2 Harrell, 250 ft. S and E of C Sec. 2-21-16.
Set 10-in. 41 ft.; drlg. 800 ft.

Shore Line Oil Corp.'s No. 1-B Standard, 250 ft. N and W, SE cor. Sec. 13-21-16.
P.B. to 1,058 ft.

CADDO—RODESSA

Ark.-La. Pipe Line Co.'s No. 1 Parker, 730 ft. S. 450 ft. E. NW cor. NE NW, Sec. 24-23-16.
Set 13⅜-in. 278 ft.; drlg. 605 ft.

Producers & Pyramid O. & G. Co.'s No. 1 Hammock, 660 ft. N and E SW cor. NW. Sec. 3-18-16.
Dry and abnd. 927 ft.

United Gas Pub. Ser. Co.'s No. 1 Christian, 724 ft. N, 1,382 ft. W SE cor. Sec. 23-23-16.
Rigging up.

SABINE PARISH—ZWOLLE

Alexander & Cane's No. 1 Fogman, SE cor. N½ SW NE Sec. 18-7-11.
S.D. 1,700 ft.

Ivan A. Allen's No. 1 La. Long Leaf, 330 ft. N and W, SE cor. NW SE Sec. 13-7-11.
S.D. 1,920 ft.

Dyer et al's No. 1 McCollister, 330 ft. S and E, NW cor. SW NE Sec. 34-7-12.
S.D. 1,100 ft.

Foster & Hartman's No. 1 Bowman-Hicks, 330 ft. S and E, NW cor. NE Sec. 10-7-12.
Tested dry 2,696 ft.

E. D. Holcomb's No. 1 Porter, 330 ft. S. 330 ft. W. NE cor. SE Sec. 7-7-11.
W.O.S.R. 2,580 ft.

H. C. Mauilding's No. 2 DeLatin, 330 ft. S and E NW cor. NE SE Sec. 3-7-11.
Drig. 1,750 ft.

Monroe Prod. Co.'s No. 1 Bowman-Hicks, 330 ft. N and E SW cor. SW SE.
Set 10-in. 40 ft.; set 6-in. 2,367 ft.

George L. Pace's No. 2 Phillips, 330 ft. N, 30 ft. W SE cor. Sec. 25-8-12.
Set 10-in. 61 ft.; set 6-in. 2,236 ft.; used acid 2,357 ft.

Pelican Nat. Gas Co.'s No. 33 La. Long Leaf, 183 ft. S, 283 ft. E, cen. Sec. 29-8-11.
Set 6-in. 2,261 ft.

Pelican Nat. Gas Co.'s No. 14 Sabine Lbr. Co., 330 ft. N and W, SE cor. NE SW Sec. 11-7-12.
Testing 2,642 ft.

Tex.-La.-Ark. Oil Co.'s No. 1 Pickering Lbr. Co., Sec. 1-8-12.
Drig. 1,800 ft.

EAST TEXAS (BORDER COUNTIES)

CASS COUNTY

United Gas Public Service Co.'s No. 1 Walton, John Coleman Sur.
Coring shale 5,606 ft.

R. K. Kamon et al's No. 1 Savage, Mary Patterson Sur.
S.D. 4,016 ft.

HARRISON COUNTY

R. C. Payne et al's No. 1 Lowery, E. D. Spain Sur.
P.B. to 3,524 ft

PANOLA COUNTY

R. H. Davis' No. 1 Wooten Est., Winnie Mann Sur.
Set 10-in. 60 ft.; drlg. 1,750 ft.

Givens & Holloway's No. 1 Wooten est., Winnie Mann Sur.
S.D. for fuel 1,115 ft.

R. W. Price's No. 1 Crawford, J. A. Williams Sur.
Rigging up.

Fred Stovall Drig. Co.'s No. 1 H. B. Ivey, P. Martin H.R.S.
Rigging up.

SHELBY COUNTY

Bush Oil Int.'s No. 1 Windham, W. M. Blackburn Sur.
S.D. 3,366 ft.

Cliff Stovall's No. 1 Pickering Lbr. Co., C. H. Patterson Sur.
Set 10-in. 30 ft.

Turner & Neil's No. 1 Pickering Lbr. Co., P. W. Harvey Sur.
S.D. 250 ft.

ALABAMA

CLARKE COUNTY

Magnolia Pet. Co.'s No. 1 Scotch Lbr. Co., 250 ft. N 310 ft. E. C Sec. 17-10n-3e.
Drig. 5,056 ft.

HOUSTON COUNTY

Rice O. & G. Co.'s No. 1 Oakley est., SE cor. NW SW Sec. 9-3n-29e.
S.D. 1,810 ft. (corrected).

NEW AND IMPROVED EQUIPMENT

Cleans or Descales Pipe in Small Working Space

W-K-M Co., Inc., Houston, Tex., announce the manufacture and distribution of a new hand-operated pipe-cleaning machine, the purpose of which is to enable thorough cleaning or descaling of pipe to be done in close quarters, in and around obstructions, on short sections of

pipe between valves or other fittings, or on short "hot spots" requiring quick but economical treatment. Cleaning is accomplished by the use of patented cutter wheels, which produce a constant chipping action. The machine is light and compact, and is applied easily to or removed from the pipe to be cleaned.

A simple adjustment controls the tension on the pipe. Travel along the pipe is automatic, being actuated by a unique arrangement of the cleaning elements. Various diameters of pipe may be cleaned by changing the plate assemblies. Operation requires two men, and drive is optional, either a single wrap of rope or offset handles being used.

Distribution of the new cleaning machine is handled in domestic fields by Crutcher-Rolfs-Cummings, Inc., Houston, Tex.

DEVICE PREVENTS EXPLOSIONS

To guard against explosive mixtures of fuel and air when lighting off pulverized coal, gas or oil fired boilers, Bailey Meter Co., Cleveland, Ohio, has developed a control trip which withholds fuel feed until the boiler is thoroughly purged. The mechanism consists essentially of two oil-sealed bells suspended from a beam to measure air flow through the boiler. A draft connection from the right-hand bell to the boiler furnace, and a similar connection from the left-hand bell to the last pass provides for the use of draft loss through the boiler as a measurement of air flow. The entire mechanism, including oil-sealed bells, snap-acting contactor and indicating pointer, is enclosed in a dust and moisture-proof pressed steel casing of attractive design.

BOILER FURNACE CLEANER

A "one-man portable" boiler furnace cleaner, weighing only 30 pounds so that it can be carried conveniently from job to job, has been placed on the market by the Arco Vacuum Corp., a division of the American Radiator & Standard Sanitary Corp. Mounted on four castors so that it can be moved easily while in use, the cleaner is sold complete with 10 standard attachments for all general work. The unit has a three-fifths horsepower Universal motor, and can be used with 110, 220 or 250 volts. Tests have shown that it will remove 1 pound of loose dirt every five seconds.

Notes About Trade Literature

The latest bulletin, No. 344, issued by Seamlex Corp., 5-19 Forty-eighth Avenue, Long Island City, N. Y., manufacturer of metal hose for use in the oil and gas industry, contains much technical information of value.

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A new generating set bulletin of 34 pages, covering vertical and horizontal engine-driven machines in direct and alternating current is available from the Troy Engine & Machine Co., Troy, Pa.

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Among recently issued publications of the De La Vergne Engine Co., Philadelphia, Pa., are five, Nos. 51 to 55, inclusive, and No. 58, descriptive of the full line of De La Vergne Diesel engines. These engines are all four-cycle, full Diesel, solid injection.

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Bishinger-Koehler Manufacturing Co., Inc., 7838 Kelly Street, Pittsburgh, Pa., maker of oxygen equipment products, is mailing a circular describing the Bk half-hour oxygen breathing apparatus.

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Stabilflo valves are the subject of a bulletin sent on request by the Foxboro Co., Foxboro, Mass., and designating these valves as "another pioneering step in automatic control engineering."

—

Ingersoll-Rand Co., Phillipsburg, N. J., issued a bulletin on its "Utility" air hoists. It describes both the single-drum air hoist, used for loading cars, dragline excavating, etc.

—

An interesting bulletin describing the application of plug valves to oil and gas well drilling has just been issued by the Merco Nordstrom Valve Co., Pittsburgh, Pa., manufacturer of Nordstrom lubricated plug valves. It shows actual installations of valves on steam and water lines, mud lines, blowout preventers, Christmas trees and tanks.

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The Linde Air Products Co., 30 East Forty-second Street, New York, announces a new booklet, "The Maintenance of Reciprocating Parts." It deals with the application by the oxy-acetylene process of wear-resisting bronze to the wearing surfaces of sliding parts.

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The Economy Electric Lantern Co., 225 West Huron Street, Chicago, is mailing to those who ask for it a bulletin on the Super Ecolite No. 44-USV lantern for use in the oil industry.

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Two new bulletins may be had from the Worthington Pump & Machinery Corp., Harrison, N. J., one on Worthington steam booster compressors and one on Worthington centrifugal pumps.

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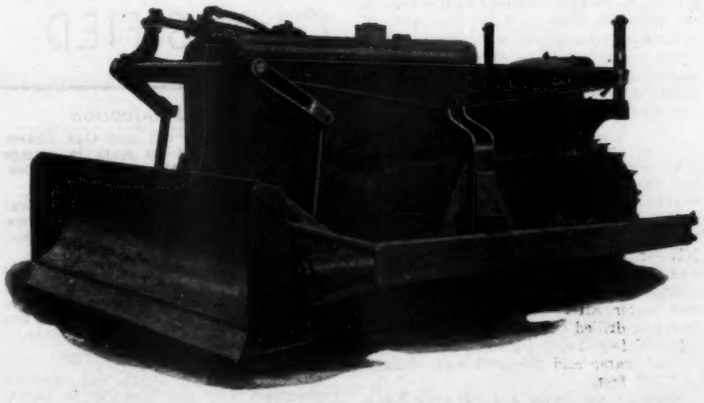
Johns-Manville, 22 East Fortieth Street, New York, has published a new 48-page catalog on its complete packing line. Over 60 different types of packings are described and illustrated.

—

Standard Air Conditioning, Inc., has been formed by the American Radiator & Standard Sanitary Corp. to take over the specialized air conditioning activities formerly conducted by one of the corporation's subsidiaries, the Campbell Metal Window Corp.

Grading and Moving of Material Done at One Time



"A bulldozer you can grade with" is the way the Continental-Wooldridge heavy-duty bulldozer is described. The blade can be tilted, either end up, so that dirt or other material that is being moved can be graded at the same time. Tilting the blade is a simple matter. The tractor operator does this by changing the height of the rocker arms at their rear attachment. This he does in his normal position, always being convenient to the tractor and bulldozer controls.

The bulldozer pulls direct from the tractor drawbar. It has its own rectangular frame, ruggedly constructed, attaching to the tractor tracks through bulldozer rocker arm brackets and the drawbar. This construction prevents any stresses of bulldozing being transmitted to the tractor frame. Rocker arms, rocker brackets, rear frame and other parts are cast in one piece and then accurately machined.

The blade is powered both up and down—or can be held in any position, whether a straight blade or tilted. This is controlled by a large-capacity hydraulic pump, operated direct from the tractor power take-off. The machines are manufactured by the Continental Roll & Steel Foundry Co., East Chicago, Ind., for Allis-Chalmers, Caterpillar, Cletrac and McCormick-Deering crawler tractors.

Men Well Known in the Equipment Field

H. S. Wherrett, president of the Pittsburgh Plate Glass Co., was recently chosen a director of the Westinghouse Electric & Manufacturing Co. Mr. Wher-

H. S. WHERRETT

rett, who was born in Connersville, Ind., began as a junior clerk in the Diamond Plate Glass Co., Kokomo, Ind., in 1891, after graduating from the Kokomo High School. From 1896 to 1901 he was in the sales department of the Pittsburgh Plate Glass Co. In the latter year he was made assistant sales manager and in 1905 sales manager, holding that position till 1917. He was chairman of the commercial department from 1916 to 1920, vice president from 1920 to 1928 and has served as president since 1928. Mr. Wherrett is associated in an official capacity with other important business concerns.

LATHE OF SIMPLIFIED DESIGN

A back-geared, screw-cutting lathe of 9-inch swing, available with countershaft drive or with motor drive, is announced by the South Bend Lathe Works, South Bend, Ind., under the name of the No. 5 "Workshop" lathe. This lathe is particularly intended for shops needing inexpensive equipment to handle small machining work. Design of the lathe is simple and controls are simplified so that the lathe may be operated not only by the experienced machinist and lathe hand, but by the novice. All fundamental machining operations may be performed, including the cutting of screw threads, right or left hand, from 4 to 40 per inch.

SINGLE STEP VOLTAGE BOOSTER

A pole-mounted booster which automatically changes a feeder's voltage either 5 per cent or 10 per cent in a single step, is announced by the Westinghouse Electric and Manufacturing Co. This new type B feeder voltage booster is particularly suitable for maintaining proper voltage for isolated loads or distribution circuits where the load changes once or twice daily from very light to practically full load.

Central West Fields

(Continued from Page 61)

itial at 3,126 feet. Same company is drilling No. 1 M. F. Acord farm, Section 17, and No. 3 Albert Holeman farm, Section 6, same township. Ohio Fuel Gas Co. is drilling No. 1-5,348 John Mason farm, Lots 20-21, Knox Township. Same company has a rig for No. 1-5,858 Alley Mattingly farm, Section 18, Muskingum Township.

In Athens County, Ohio Fuel Gas Co.'s No. 1-5,836 Alden A. Buck farm, Fractional 17, Lodi Township, is a gas well at 1,638 feet.

In Tuscarawas County, W. D. Hunt and others' test on the A. E. B. Chittenden farm, Lot 21, Perry Township, was dry at 593 feet.

No completions were reported from Stark County, although numerous wells are getting close to the Clinton formation, the source of both oil and gas. East Ohio Oil Co. is drilling below 4,225 feet on the James Boren farm, Section 13, Jackson Township. Same company is drilling below 3,750 feet in No. 1 George Letherman farm, Section 11, same township, and below 3,500 feet in No. 1 John W. Essig farm, Section 2, same township. McFarland and others have a rig on the Edward A. Frank farm, Section 12, same township. Same company is spudding No. 1 Catherine Schumacher farm, Section 31, Plain Township. Brendel Producing Co. is drilling below 4,480 feet in No. 1 E. and J. Graber farm, Section 14, same township, and spudding No. 1 M. E. Humbert farm, Section 4, same township. Cunningham Natural Gas Co. is drilling No. 2 F. and A. Willaman farm, Section 7, below 4,270 feet, and its No. 2 Levi A. Stoner farm, Section 20, same township, is drilling below 3,125 feet.

Upham Gas Co. is drilling below 2,560 feet on the Samuel V. Baker farm, Section 6, Brown Township, Knox County, and drilling below 2,860 feet in No. 1 George Swingle farm, Section 12, Jefferson Township.

In Guernsey County, Ferguson & McCullough's No. 4 Fred A. Foraker farm, Lot 21, Willis Township, is a gas well at 1,455 feet. Ohio Fuel Gas Co. is drilling No. 1-5,865 J. L. Lent farm. Lot 22. George Jewell & Co. is drilling No. 1 Joe Polasky farm, Lot 2, and C. E. Frame and others are drilling No. 1 J. B. Rue farm, Lot 3, same township.

In Meigs County, Ohio Fuel Gas Co.'s No. 1-5,853 James Titus farm, Lot 4, Rutland Township, is a gas well at 998 feet.

ILLINOIS-INDIANA

Only one completion was made in the Illinois Field. Stolberg and others' No. 1 George Stolberg farm, SE Section 28, St. Clair Township, St. Clair County, was dry, nothing but water found.

There were no completions in the Indiana Field.

KENTUCKY

Fourteen completions were reported from the Kentucky Field, and greater activity is reported, fairly good producing wells being found at comparatively shallow depths.

In Ohio County, W. E. Hupp and others' No. 2 Frank Richards farm, in the Matthews Pool, produced 160 bbls. initial. Same company's No. 1 Oscar DeWitt farm, same pool, was dry at 550 feet, and its No. 1 W. W. Johnson farm, same pool, was dry at 450 feet. Petroleum Co.'s No. 1 C. H. Downs, 6 acres, same pool, produced 50 bbls. initial. Kentucky Natural Gas Co.'s No. 1 C. Duggins farm, same pool, produced an initial of 75 bbls. Snowden-McSweeney Co.'s No. 4 J. W. Peckenpaugh farm, in the Matthews Pool, showed an initial of 100 bbls. In the Kelley Pool, same county, A. F. Bellamy and others' No. 2 Lida Carter farm, was dry at 750 feet.

In Daviess County, Owensboro Field, Daley and Daley's No. 1 R. O. Payne farm was dry.

In Hancock County, Sands Petroleum Co.'s No. 2 Edwards Wells farm, in the Matthews Pool, produced 20 bbls. initial and Ivyton Oil & Gas Co.'s test on the J. H. Smith heirs farm, same pool, produced 25 bbls. initial.

In McLean County, Mike Callas and others' No. 2 Edward Wells farm, was dry, as was J. A. Ackers & Co.'s No. 2 George Boles farm, and J. C. Miller and others' No. 6 Jim Hatfield farm, showed an initial of 20 bbls.

In Allen County, Mount Ariel Pool, Ben Rubles' test on the Charles Willoughby farm, was dry at 450 feet.

Chicago Refined Oil Market Is Unsettled

(Continued from Page 39)

winter. The trend toward higher prices on these products, however, has been interrupted to some extent by the furore over allegedly excessive prices through the oil administration. Gas oils and zero fuels are in a situation analogous marketwise to the distillates.

Heavy Fuels

Heavy fuels are still marking time. General industrial conditions are still open to some doubt and the orders for industrial fuels and gas oils are accordingly slack. Prices are mostly unchanged.

Naphthas

Dullness continues in naphthas and solvents, although the volume of material moving to buyers is still fairly good. Ruling quotations hold about the same as recently.

Lubricants

Lubricants are weak and in little demand. Buying by both jobbers and compounders has dwindled greatly and material is offered more freely than it is taken out.

Wax

Demand for the better grades of wax is still good. One of the large sellers has been forced to buy outside but has now overcome this situation and again has material.

Kansas Fields

(Continued from Page 53)

16w, Otis Gas Field of Rush County, flowed 153 bbls. in 24 hours, with 12,500,000 feet of gas coming from the Siliceous lime found at 3,527-36 feet, total depth. It has not been completed and rumor has it that it will be deepened.

Barton County

The wildcat test of the Atlantic Oil Producing Co., No. 1 Straub, C SE NW Section 36-18-11w, Barton County, topped the Siliceous lime at 3,286 feet and at 3,313 feet, total depth, it swabbed 2 bbls. of oil per hour with a show of water. It was plugged back to 3,310 feet at which depth it was given a shot of acid and then shut in.

Ellsworth County

Ellsworth County had three oil wells, one showing for a well and one apparent failure to offer as its share of the week's work. The test of Slick Estate, Pryor & Lockhart's No. 1 Wilkins "A," NE cor. Section 24-17-10w, Heiken Pool, was shut down for orders when the hole started filling with a small amount of oil and water after cement plug at 3,263 feet was drilled out. Siliceous lime from 3,233-67 feet, total depth, carried a hole full of water and the well was plugged to 3,263 feet.

Slick Estate, Pryor & Lockhart's No. 1 Wilkins "B," SW cor. Section 18-17-9w, Heiken Pool of Ellsworth County, was completed for 539 bbls. on the pump for its potential gauge. Production is coming from acidized Siliceous lime at 3,263-85 feet, total depth.

In the Stoltenberg Pool, Ellsworth County, Gypsy Oil Co.'s No. 2 Kozisek, NE SE SE Section 16-16-10w, potentialed 200 bbls. of oil and 110 bbls. of water on the pump. It is Siliceous lime production coming from 3,376-94 feet, total depth.

The Derby Oil Co.'s No. 3 Stoltenberg "A," SW NW Section 22-16-10w, Stoltenberg Pool, Ellsworth County, pumped 937 bbls. of oil in 24 hours from the Siliceous lime logged at 3,352-57 feet. It was shut in awaiting effects of acid treatment.

Stanolind Oil & Gas Co. and Gypsy Oil Co.'s No. 5 Stoltenberg, NW SW Section 22-16-10w, Stoltenberg Pool of Ellsworth County, was drilling ahead at 3,343 feet with 500 feet of oil in the hole coming from Siliceous lime topped at 3,335 feet.

Russell County

Tom Palmer has completed his No. 2 Borrell, SE NE Section 21-13-14w, Russell County, for a potential pumping gauge of 292 bbls. in 24 hours. Production is coming from acidized Siliceous lime at 3,275-98 feet, total depth.

The Texas Co. has a producer in its No. 3 Jacobs, NW SW Section 31-12-15w, Russell Pool of Russell County, pumping 90 bbls. of oil and 10 bbls. of water on a 20-hour test. Production is from the Oswald lime found at 3,006-3,081 feet, total depth. It will be given a shot of acid.

Pat Ashby's No. 1 Whitson, NW SW SW Section 16-11-15w, Russell County, was shut in awaiting effects of acid treatment of the lime from 3,130-75 feet. It had swabbed 200 bbls. in 24 hours before treatment.

First reports for Russell County are as follows: Eldorado Refining Co.'s No. 1 Stratman, SW SE SE Section 32-14-114, a wildcat test, location; Stearns & Streeter's No. 1 Beardsley, NW NE SE Section 22-13-14w, cellar.

Rooks County

The Rooks County wildcat test of the Phillips Petroleum Co. No. 1 Dopita, C SW SW Section 31-8-17w, which was reported as a completion last week, has been deepened to 3,345 feet, at which depth the 7-inch casing was set and the well was being cleaned out.

Ellis County

Stanolind Oil & Gas Co.'s No. 36 L. L. Austin, SE NE Section 36-12-16w, Ellis County, was completed for 195 bbls. on the pump after Oswald Lime from 3,005-80 feet, total depth, had been acidized.

Barber County

Lario Oil Co. and others' No. 1 Whelan, C NW fourth Section 32-31-11w, Barber County, sprung a surprise when it started flowing oil from the Mississippi lime found at 4,355-4,435 feet, total depth. This is a rank wildcat test, pretty well protected by the operators. Reports had the well making 1,000,000 feet of gas and flowing every hour with no estimate on the production.

Greenwood County

Young and others' No. 1 Bitler, NE NW NE Section 2-26-10, Greenwood County, was completed for 50 bbls. on the pump. Production is coming from the Mississippi lime logged at 1,965-80 feet, total depth.

Slick Estate, Pryor & Lockhart's No. 1 Leedy, SW NE Section 25-22-9, Greenwood County, which extends production in the Browning Pool 1 mile to the north, had Bartlesville sand 2,426-86 feet, producing 140 bbls. in 24 hours on flow. It was given a 10-quart shot of nitro at 2,474-84 feet and flowed 97 bbls. in 12 hours. It was being cleaned out.

Greenwood County had one first report in Abell & Rhoades' No. 5 Blackwell, SW SE NE Section 16-24-13, location.

Richmond and others' No. 1-A Bronsenger, CEL NE NE SW Section 24-27-3e, Butler County, had Wilcox sand from 2,975-3,012 feet, total depth, which pumped 23 bbls. in 24 hours. It was a completion.

Kinney-Coastal's No. 1 Hull, NW SW NW Section 3-26-8e, Butler County, had Bartlesville sand from 2,540-80 feet, total depth, which had a small show of oil but would not produce in commercial quantities. It was abandoned.

Sheldon and others' No. 1 Houston, SE NE SE Section 1-25-3, Butler County, was showing for a very light well in sand 2,674-79 feet, which was acidized to swab 4 bbls. of oil and 25 bbls. of water in 3 hours. It was shut down.

Saco Oil Co.'s No. 1-A Bremer, SE cor. Section 26-24-3, Butler County, was a dry hole at 2,785 feet. Mississippi lime topped at 2,744 feet produced water and it was abandoned.

Saco Oil Co.'s No. 1 Chaney, SE NW Section 35-24-3, Butler County, had Mississippi lime from 2,702-59 feet, total depth, which failed to respond to acid treatment. It was dry and abandoned.

Cowley County

Cowley County had two wildcat operations to start up and one inside location staked. The list follows: Ostott and others' No. 1 Eckhardt, SE SE NW Section 15-35-6, wildcat test, building rig; Wakefield and others' No. 1 Weigle, NW SE SE Section 6-32-6, wildcat test, building rig; Lewis Production Co.'s No. 3 Sitton, SE NE Section 30-31-6, cellar.

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Situations Wanted

WANTED—Position by man with 20 years experience as Accountant-Auditor oil and gas industry, all branches; also Utility Management. Relieved from present position in reorganization of Company. Any location. Address J. E. AITKEN, Newark, Ohio.

WOULD PROVE valuable assistant to independent organization. Ten years experience in Texas, Contracting, Land and Geological work. Box G-301, The Oil and Gas Journal, Tulsa, Okla.

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